PHOTO-ERA MAGAZINE

For the Photographer and Kinematographer

Copyright, 1932, by PHOTO-ERA PUBLISHING COMPANY, INC.

Vol. LXVIII **FEBRUARY, 1932** **No. 2**

Photography on the International Ice Patrol

LIEUT. COMDR. N. G. RICKETTS, U. S. COAST GUARD

SIX years ago I was ordered to the *Modoc*, one of the Coast Guard cutters usually detailed each spring to the International Ice Patrol. I heard many stories from the other officers concerning this special service and looked at the negatives and prints of their experiences with much interest. Their photographic results made me determine not to let the opportunity pass, but to get a complete pictorial record of the ice patrol—if possible, a better one than had ever been obtained before.

I had owned a Brownie box camera when a small boy and had made blueprints from its negatives, the rolls of film being developed at a drugstore. My modest outfit had been lost for many years and I had never bought another one, although I had made a few snapshots from time to time with borrowed cameras and had had the rolls developed and printed by photo-finishers. Thus my photographic knowledge was practically nil when I joined the *Modoc;* but a few months of spare time practice in making still pictures and motion-pictures did something to overcome my ignorance in this respect.

When the *Modoc* departed on ice patrol in March, 1926, I was armed with a postcard-size Kodak and an Eyemo motion-picture camera—also considerable photographic literature, a correspondence course in motion-picture photography, and great enthusiasm. The result was that I accumulated during my first ice patrol season considerable material. Most of it was of poor quality; but a certain percentage of it was good enough to keep up my interest, and I eagerly added to my ice patrol pictures from year to year.

As the subjects available were unusual, they were a source of revenue from news-picture and news-reel companies from the start. I also sold, through agents, quite a number of prints to the officers and crews of the two ice patrol vessels. Let no one conclude from the above that my photographic adventures have been financially profitable. My total receipts from pictures to date have been a little over $800 less than expenses. When the pleasure and experience gained is taken into account, however, I consider myself far ahead. Besides, I have, of course, considerable equipment and an irreplaceable collection of still and motion-picture negatives and prints to show for my outlay and work.

The excess of outlay over returns is mainly my own fault. I have been "gypped" several times by unscrupulous persons, but now that I have learned to trust my products only with well-established and reliable people, better results are to be expected.

Being endowed with a natural aversion toward labor, I have followed the expensive course of having most of my developing and printing done by others. I have certainly spent much and missed much pleasure in this manner. Nevertheless, I contend that more has been accomplished in several directions than otherwise would have been the case. This is an age of specialists, and I believe that if one concentrates on the making of still and motion-pictures he can well let the developing, printing, and distributing be done by others. The best professional laboratories give excellent service at reasonable cost. It is no little satisfaction to know that one has given more or less employment to people in such establishments and brought many pictures before the eyes of ultimate "consumers"—all with the expenditure of very little effort and time.

XUM

TOWARD THE SUNSET — N. G. RICKETTS

Outside of making pictures, it is only the printing of some of the still pictures that I do myself. I have a very old but excellent homemade printer bought for five dollars from a photo-finisher who had just installed modern equipment in his shop and had no further use for it. With this box, three trays, four grades of Haloid Rito printing paper, M. Q. tubes, acetic acid, and acid hypo, I can, with the help of water, electricity, and a bathtub, make about 100 contact prints on 4 x 6 paper during an evening's work of from three to four hours. These prints cost about one cent each to make, whereas if I had them made they would cost about six cents each. By printing some of the stills I not only save money, but at the same time give myself relaxing work. At the risk of drawing down the contempt of PHOTO-ERA readers, however, I must confess that this printing work is often tiring and monotonous to me. I often wonder if I should not get more pleasure and more benefit in the long run by devoting the same amount of time to studying and reading along certain photographic lines.

At present I have, besides a carefully numbered and filed collection of still prints and negatives, some 15,000 feet of 35-millimeter (Eyemo) negative of ice patrol activities. This past summer, stimulated by previous success in getting a 1,000-foot educational motion-picture produced from some of the motion-picture material by the University Film Foundation at Harvard University, I got a commercial motion-picture company interested in the remainder of it. They have given me a contract wherein they agree to synchronise a talk with the best of the negative and to distribute the resulting talking picture, the net profits, if any, to be divided 50-50 between us. This proposition may eliminate my $800 photographic deficit, but I am not counting on it—I have been disappointed financially by pictures several times.

Probably the surest way to come out ahead financially is to take hold oneself. Consequently I have had some 150 lantern-slides made from my best still negatives and am learning to lecture with them, hoping in time to come up from behind in this way. This may prove a vain hope; but the pleasure and experience gained will many times repay the initial expense and the effort. Already I am positive of that.

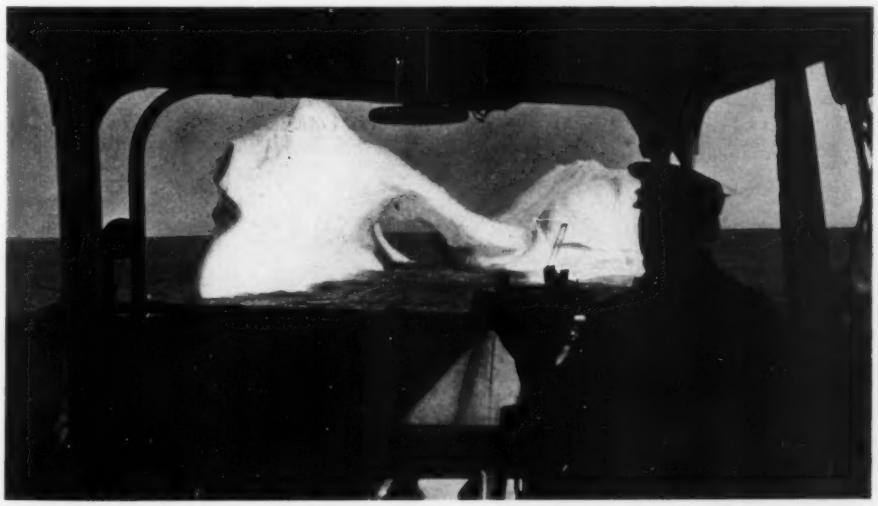
Three years ago, and again this past summer, probably due in part to my knowledge of how to make still- and motion-pictures, I was ordered to accompany expeditions to Labrador and Greenland waters which the

United States Coast Guard was conducting to further the scientific research work of the International Ice Patrol. My pictures have been largely used to illustrate the official publications of the expeditions, and the northern still- and motion-picture negatives form the most valued part of my ice patrol collection.

I would not advise anyone to try to make both still- and motion-picture records at the same time. Very often at least one of the records is bound to suffer, particularly if the photographer has in addition many regular non-photographic duties to perform. As an instance, I might mention that one August day in 1928 we sighted three polar bears while forcing the U. S. Coast Guard Cutter *Marion* through heavy pack ice just east of Cape Dyer, Baffin Island. We shot two of the bears and then captured the third one alive. I got a complete motion-picture story of the above events; but things happened so fast that I was unable to get a single still picture. To have done so would have ruined the completeness of the motion-pictures. The bear we captured alive, by the way, was sent to the National Zoo after our return to the United States, and, if it has not died recently, it can be seen in one of the bear cages at Rock Creek Park, Washington, D.C.

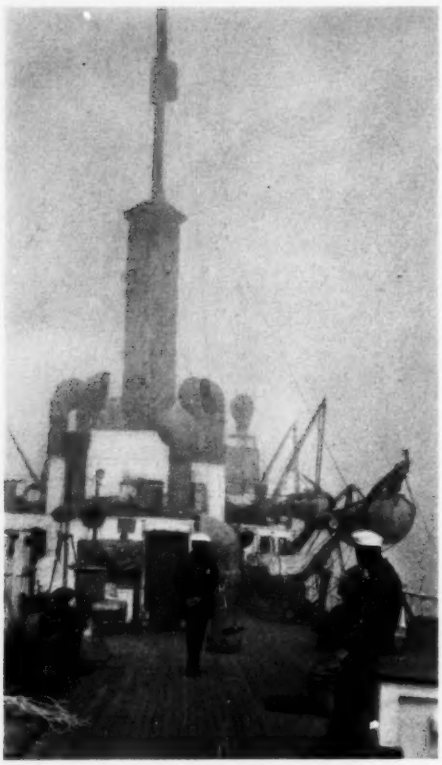
Sometimes working with both movies and stills is an advantage. I shall never forget how my Eyemo jammed and refused to work after I was landed on an iceberg on the edge of pack ice in Davis Strait. I have several unusual stills of the ship cruising around, the berg under my feet showing as foreground to prove my position; but the movies are badly light-struck, due to opening the Eyemo in broad daylight to clear the jam.

On April 14, 1912, the TITANIC, while on her maiden voyage from England to the United States, struck an iceberg near Latitude 41° 46' N, Longitude 50° 14' W. She went down in less than two hours and over 1,500 people were drowned in the ice cold water. For many years the U. S. Coast Guard has carried out an Ice Patrol about the Grand Banks during the berg season to prevent the repetition of such a disaster. The cost of this service is borne by the principal maritime nations using the North Atlantic Ocean.



WATCHING AN ICEBERG N. G. RICKETTS

XUM



FOG N. G. RICKETTS

Another time in the north the shutter on my Kodak gave out. The best mechanics on the ship tinkered with it, but could not repair it. For the rest of the cruise the movies came out beautifully; but stills had to be limited to bulb and time exposures. Bulb and time were excellent for scenic views ashore, wherever there was not too much motion in the foreground. Hand-held views and views from the vibrating and moving ship were, of course, impossible by these methods.

I had no tripod and was often hard put to find steady resting places for the defective still camera. More than one picture was made with one hand, while the other was jamming the camera down firmly upon a hummock of ice on a Greenland glacier. Other views were made from piles of rocks. In throwing up one of these small cairns the writer tackled a stone too big for him. It rolled back just after it was started from its bed, catching one finger and smashing the nail. A handkerchief was wrapped around the injured member, however, and the cairn was built and the desired picture made in spite of everything.

The writer considers himself a rank amateur and hesitates to give any advice regarding equipment, sensitive material, or exposure. However, for the encouragement and benefit of other amateurs who may want to make pictures in connection with business or pleasure trips, some data on these subjects will be given.

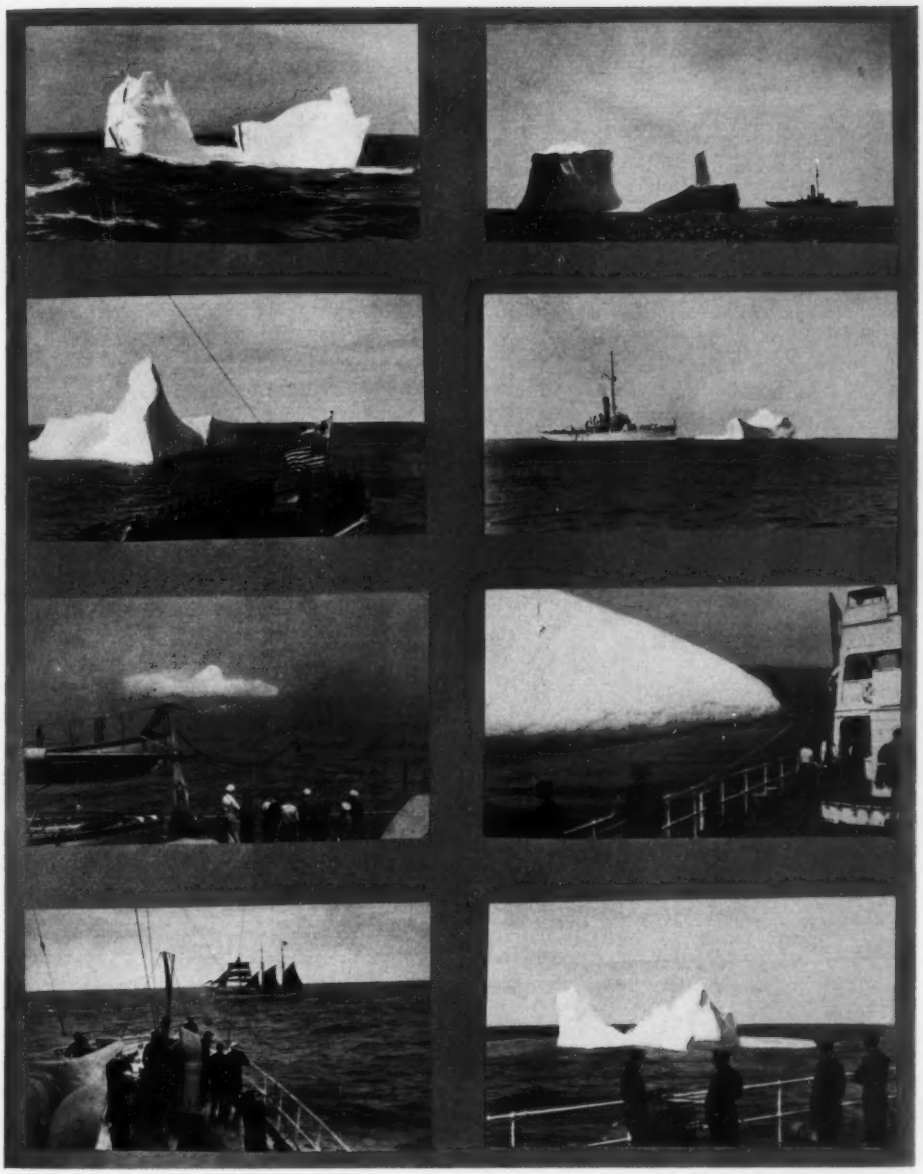
I use an Eyemo motion-picture camera equipped with a Taylor-Hobson Cooke 47-millimeter F/2.5 lens. This camera is now an old model and only uses film at rates from 30 to 60 feet per minute. If I were getting new equipment, and could afford it, I would get a modern Eyemo equipped with several lenses and using film at a normal speed of 90 feet per minute.

Talk and music can be synchronised on 35-millimeter negative film exposed at 60 feet per minute, but normal projection is now at 90 feet per minute. Undoubtedly action on film exposed at 60 feet will be somewhat fast and jerky when projected at 90. In scenic subjects there is often little foreground action, and this difference between taking and projecting rates might not be objectionable. One thing in its favor is that less film is used, and the camera has to be reloaded less frequently at 60 feet per minute than at 90.

I have always used orthochromatic film in the Eyemo in 100-foot daylight loading rolls. The next time I buy motion-picture film I shall try panchromatic. This will entail the use of filters, accessories which to date I have not bothered to get. I have always sent the Eyemo to its makers for examination and overhaul after each year's work. The money so laid out was very well spent.

Thirty-five-millimeter movies are an expensive proposition at best. Unless they desire to go in for commercial propositions, amateurs should not go wider than 16-millimeter. Sixteen-millimeter can now do everything but talk, and probably it will soon be able to do that. Anyone desiring to get the most out of movies should join the Amateur Cinema League, 105 West 40th Street, New York City, and make free use of their advising and consulting departments.

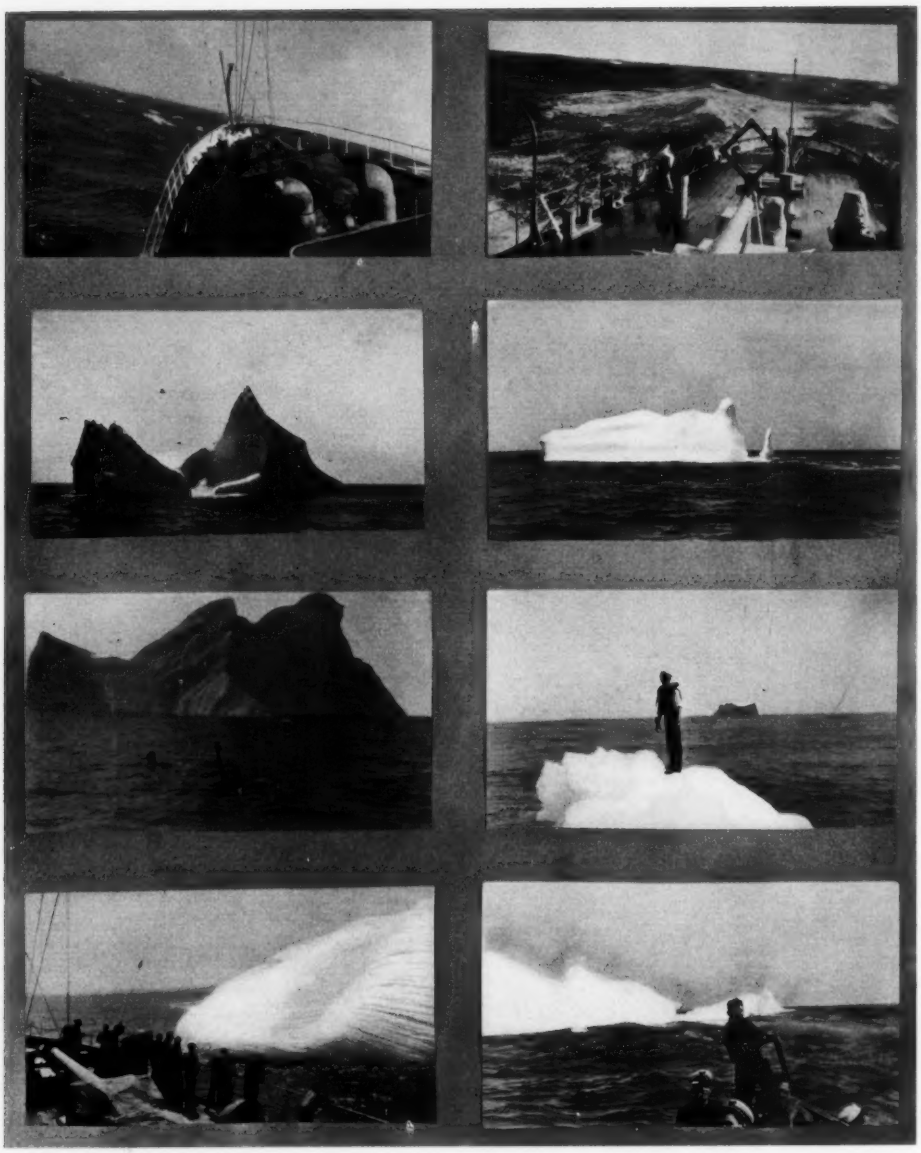
Practically all my still pictures have been made with a 3A (3¼ x 5½) Kodak fitted with a 170-millimeter F/6.3 Kodak Anastig-



1. *Berg with dirty ice streaks*
2. *Titanic memorial service*
3. *Iceberg in light fog*
4. *French fishing vessel*
5. *Iceberg and patrol ship*
6. *On guard*
7. *Passing close to a berg*
8. *Watching a berg*

GROUP ONE—ON THE INTERNATIONAL ICE PATROL N. G. RICKETTS

XUM



1. *Stormy weather*
2. *Icebergs*
3. *A cool swim*
4. *Close to a berg*
5. *Blowing a gale*
6. *An odd-shaped berg*
7. *A small berg*
8. *Returning to the ship*

GROUP TWO—ON THE INTERNATIONAL ICE PATROL

N. G. RICKETTS

mat lens and an Ilex shutter. The latter gives exposures from 1/100 to 1 second, and bulb and time. I consider this camera a fine instrument, reliable and quick, and easy to snap into action. About a year ago, I got an Orix 4 x 6 (10 cm. x 15 cm.) camera fitted with a Carl Zeiss Tessar 16.5-centimeter F/4.5 lens and a Compur shutter, which permits exposures from 1/250 to 1 second, bulb and time. This new camera can do a few things which the Kodak cannot do, and it has a few advantages, such as a wire direct view-finder, filmpack instead of rollfilm, and a groundglass focusing back. I hate to mar its beauty with knocks, rain, and spray, however, and have generally kept it in reserve. In my opinion the old Kodak is its equal in fine, bright weather for all my work. I have made pictures of the same scene with the two cameras, both used at 1/25 and F/11 and at 1/50 and F/8. So far as can be told by the naked eye, the results are identical.

I have used almost exclusively orthochromatic Agfa rollfilm and filmpack and have not bothered with filters or sunshades. Of course, I shade the lens with one hand when making a picture, provided the extra hand is not needed for holding onto rigging or other objects. When the legs are trained at wrapping themselves around firm supports, it is very seldom, even aloft, that both hands and arms are not free.

Exposure bothers me but little, and I have never used an exposure meter. I find there is enough light to use 1/25-second and F/11 for most of my pictures. During spring and summer we are usually between the latitude of New York and that of Quebec; so the sun is high around midday. Ashore, and farther north, I use 1/25 and F/8 or F/6.3. The icebergs themselves are very bright in sunlight. Off the Grand Banks, I have used 1/25 with F/16 and 1/25 with F/22 on them with almost identical results.

When the weather is dark and gloomy, I open to F/6.3 and use 1/25 or even 1/10. I have not had much trouble with movement at 1/10-second, for I always try to hold the camera firmly against my body and squeeze off the wire shutter release gently, just as one should manipulate the trigger when firing a pistol or rifle. I find pictures made on cloudy days are apt to be dull and uninteresting and have learned to refrain from making any at all when it is unusually dark.

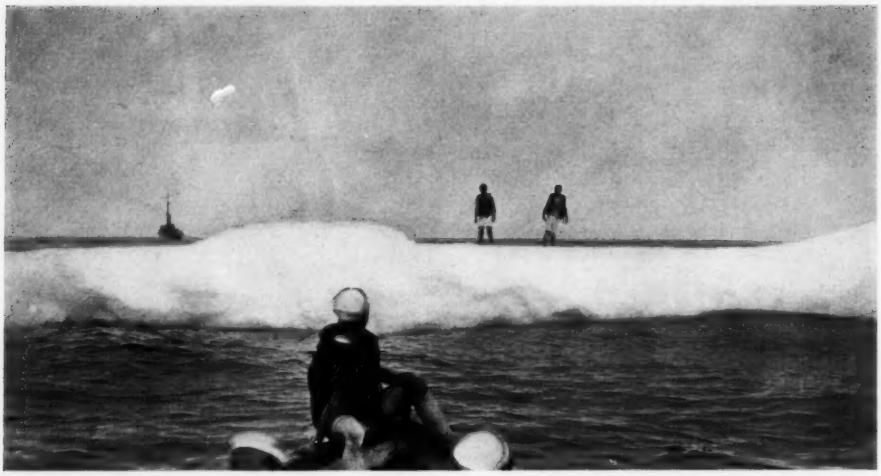
THE BOW FROM THE CROW'S NEST
N. G. RICKETTS

Most of my pictures are made with the distance scale set for infinity. For 25- to 100-foot views, I estimate the distance by eye. When photographing objects closer than 25 feet, I usually pace off the distance from subject to camera. If this is impossible, I make a guess, which often, of course, is not correct.

Whenever the camera lens gets wet with spray, I lick it off and then dry it. I have always used ordinary, cheap handkerchiefs to clean my lenses, frequently breathing on them and rubbing them clear with the cloth. Despite all the warnings one reads about, after six years of this practice I fail to see that the lenses are damaged or scratched a bit.

The cameras and films when not in use are stored in my stateroom. This is a dry, steam-heated place, which is usually kept at ordinary room temperatures. I have never

XUM



HAVING FUN ON AN ICEBERG — N. G. RICKETTS

had any sensitive material or latent images spoil in it. We are seldom away from large cities for more than two months at a time. If the exposed films had to be kept for longer periods than that, I might have run into difficulties, for they are simply piled in loosely with clothing in a drawer under the bunk.

As each roll of the ordinary film is exposed, I put it back into its tinfoil and cardboard coverings, mark "exposed" on it, and in addition write on a serial number. In a little 2½ x 4-inch notebook kept in my vest pocket, I jot down a few facts about the subjects, light-conditions, and exposures concerning the roll. I might add here that, when reloading the camera, the operation of the shutter is usually checked several different times, dust is blown and knocked out of the camera, and the back of the lens is cleaned with a handkerchief.

At the end of the cruise, I take or mail the 10 to 30 rolls of exposed films to a reliable photo-finisher, telling him the subjects are important to me and asking him to take his time and do a good developing job, so that the negatives will last for a lifetime.

It is a tense moment when the developed negatives are back on board. I sit down by a light and a wastebasket to look them over. At least 25 per cent of the films go at once into the discard, mainly for being dull and uninteresting. A few will be out of focus, and a few will show movement of camera or subject. Double exposures and blanks due to accidental tripping of shutter will be present, but are rare.

The lot which survives the first scrutiny is quickly arranged into rough chronological order and gone over once more. Over half of the negatives go into a pile which is put away in an envelope marked with the name of the cruise and the word "Seconds".

The remainder, although serious photographers would probably label them seconds also, include my finest. Serial numbers are put on their clear margins with pen and ink. Each selected negative is wrapped in a sheet of onion-skin typewriter paper. The wrapped negatives are placed in lots of ten in envelopes. These envelopes are put into a large manila envelope marked with the name of the cruise and the word "Firsts". None of the negatives are retouched, intensified, reduced, or given any after-treatment.

From each of the "firsts", I usually have six prints made on single-weight glossy paper. When these prints are received, they are sorted out and numbers are placed on their backs agreeing with the numbers on the selected negatives. The prints are arranged into six sets, and caption sheets are written and typed for the same. I usually keep two sets for my own files and use, and give two sets to someone on the ship for sale and for

use as sample sets. They are very handy for that purpose, as each print is numbered and additional prints in any quantity can be turned out by me upon receiving orders by number.

The two remaining sets and captions are sent to United States Coast Guard Headquarters, Washington, D.C. Like almost every Government activity, the Coast Guard desires to have on file as complete a pictorial record as possible of its field activities. Every one of the larger cutters has an official 3-A Kodak or better camera, and many of them have developing and printing facilities. A few have motion-picture cameras for getting scenes of their work.

I could use official cameras and films and could have all the developing and some of the printing done at Government expense. There are several reasons why I requested permission to use my own cameras and films and why I pay for all the developing and printing work. For instance, working as I do, on my own, I am freer to get what I want, from whom I want to get it, and to experiment. I can also have the fun of trying to sell my pictures. Besides, the negatives now are my own to keep and to use in any proper way. The best ones are always at hand in my own custody and are not stored away somewhere at Washington.

No doubt readers who have followed this article thus far have concluded that I am only a snapshooter. I frankly admit that such is the case, but would reply that so are most Americans. Doubtless many of them, like me, are getting a lot of pleasure and information out of their snapshooting.

As for results, I should rather let the pictures that accompany this article speak. They are a few of the best from the southern work of the International Ice Patrol about the Grand Banks off Newfoundland. There is no room here to go into the details of the ice patrol service. Anyone desiring to find out about it is referred to U. S. Coast Guard Bulletins 18 and 20. U. S. Coast Guard Bulletin 19, Part 1, tells about the northern work of 1928. All of the above bulletins are illustrated almost entirely by pictures from my 3-A Kodak. If your local library does not have these publications, have the librarian write to the Commandant, U. S. Coast Guard, Washington, D.C., for them. A limited number of copies of each of these bulletins can be obtained free of charge by libraries and educational institutions.

CLOSE-UP OF AN ICEBERG N. G. RICKETTS

[Although most of our readers may never see an iceberg, we believe that they cannot fail to be interested in the work of the International Ice Patrol which since the *Titanic* disaster has guarded the North Atlantic for ships of all nations. The story by Commander Ricketts is not only interesting but practical. There are many excellent suggestions and ideas which our readers will find helpful. The value of photography to the Government is shown by this article. Were it not for the illustrations it would be difficult for the average landsman to visualise the work being done to safeguard life and property. It is by means of photography that not only the Government but all branches of science and industry can tell an interesting and convincing story of their activities and progress.—EDITOR.]

XUM

The Photographer's Vocabulary

GEROLD C. WICHMANN

PHOTOGRAPHY is a science, and like every science it has a terminology of its own. As a science it demands accuracy of language. To understand a science we must also understand the language of that science, and inaccuracy and carelessness in the use of that language imply a lack of understanding. Some photographers still use popular and slang words. Here are a few examples:

"Shoot" and "shot". This is an example of what is probably the worst misuse of language among photographers. They talk of "shooting" the customer when they make a portrait and of making so many "shots" of him. These two words belong to the language of the sportsman and have no relation to photography. They are in no way appropriate to use. "Shooting" is done with a gun; it implies an act of violence; it implies an idea of suddenness and an element of chance; it implies that there is an object or person shot, or a victim. These two words imply everything that a photographer should avoid. Use the words "expose" and "exposure".

"Soup", "cook", and "burn". The developer is "soup", to develop is to "cook", a developed negative is "cooked", and an overdeveloped negative is "burnt up". Perhaps these words go back to the days when the photographer was an amateur and did his work in the kitchen. These terms are all appropriate to cooking, but not to photography. Use the words "developer", "developed", and "overdeveloped".

"Dope" and "doped" are sometimes used to denote various chemicals and chemical solutions. The use of these two words implies laziness of thought and carelessness of speech. In mentioning chemicals, always name them by their correct name.

The language of science must be a language of accuracy. Many terms in use are too indefinite and too inaccurate. Here are a few examples:

"Handful" and "spoonful". Formerly the photographer used so many handfuls of hypo and so many spoonfuls of this or that chemical. Modern formulæ require exact measurements in terms of pounds, ounces, and grains.

"Cold", "lukewarm", "warm", and "hot". These terms are all only relative and not exact scientifically. Modern formulæ demand exact temperatures in terms of degrees. Even a matter of one or two degrees makes a large difference in the development of a negative.

"Red light", "green light", "yellow light". These terms are too indefinite. Not all red, green, and yellow lights are safe. A certain band of the spectrum among the reds, greens, and yellows is safe for photographic manipulations. The safelights used by photographers are made according to certain scientific formulæ and the light transmitted is carefully measured. Placing a piece of red paper over a white light does not make a safe light for developing films. Many a photographer has learned to his sorrow that red, green, and yellow lights can fog films and paper. Instead of saying red light, green light, and yellow light, use the terms red safelight, green safelight, and yellow safelight.

As advances are made in a science there must also be changes in the language belonging to that science. Some words will be discarded altogether, while others will be used with a change of meaning or will be discarded and more appropriate words used in their place. Here are a few examples:

"Headrest". In the past a headrest was necessary to hold the "sitter's" head in position, because the process of making an exposure was a very slow one, due to slowness of lenses, slowness of negative materials, and weak light. Now, with the discovery of faster lenses, faster emulsions, and better light, the headrest is no longer necessary.

"Sitter" and "sitting". These words, while still in use, will also disappear with the headrest; for photography is no longer the slow, tedious process these words imply. We still "sit" for paintings, but we "pose" for photographs.

"Snapshot" and "time exposure". These words are disappearing from the language of the professional and are left to the amateur, who also will in time discard them. There is no distinction between snapshots and time exposures. All exposures are time exposures, because they require a certain amount of time. There is only a difference of relativity. A second may be a very short time for a photographic exposure and a hundredth of a second a very long one. Bullets have been photographed in flight and the velocity of light has been measured. When speaking

of exposures, we must give the exact time in terms of seconds or fractions of a second.

"Darkroom". This is an example of a word that will be either discarded or used with a change of meaning. The darkroom was formerly a small room painted jet black. The only light used was a small localised light near the developer. As no light could be reflected from the dark walls, the remainder of the room was of course perfectly dark and the word "darkroom" was appropriate. The modern developing room is painted white. Indirect lighting is used,—so that the whole room is illuminated. The white walls and ceiling reflect the light of the safelight; but since this light is perfectly safe, only rays of light which are safe are reflected. Instead of working in total darkness we work in a well-lighted room in which we can find our way about without bumping our heads or knocking things around. If extra-sensitive materials are used which must be handled in total darkness, we simply turn off all the lights, and since no light is in the room there can be no reflected light.

We could write a history of photography by writing a history of the language of photography. To understand photography is to understand its language, and vice versa. There is no advantage in using popular and slang words when talking to someone who does not understand photography. Our customer expects us to understand more about the subject than he does, and expects us to use terms he does not understand. Correct speech means correct thought, and the photographer as a scientist must think correctly in order to make progress in photography.

Practical Photography for the Landscape Architect

FRANCIS W. HUSSEY

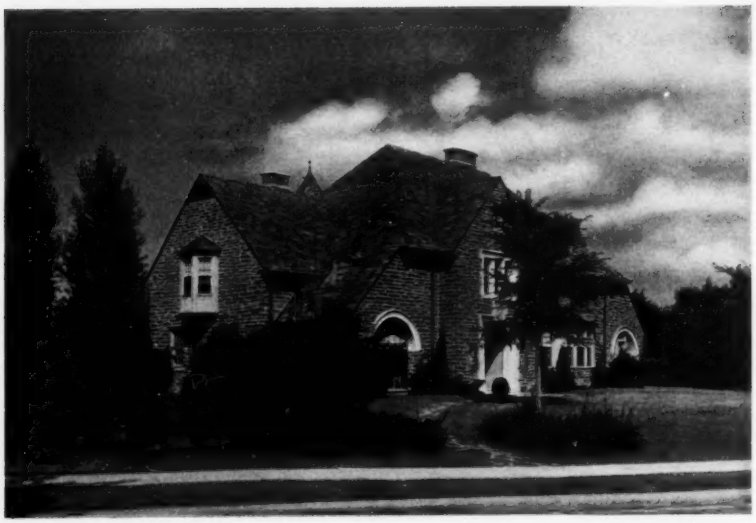
AS a beginner in the profession of landscape architecture, I was slow to appreciate the need or value of photography. Trying to establish a paying practice in a community where there were several worthy competitors gave me many other things to think about. I knew I should be making pictures; the idea was there. It sprang up every spring like the early perennials, and was just as frowzy and forgotten by midsummer. I had a vest-pocket camera, and many a film nestled comfortably therein till long past its expiration date. Meanwhile, I slaved with blueprints, pencil sketches, and nurserymen's exaggerated catalog cuts to get my ideas across. When I fared forth to tell someone why he should use rhododendrons, birch, *et cetera*, when he wanted blue spruces and red maples, I looked like an itinerant wall-paper salesman.

Then one day I was buttonholed by a dealer in photo-supplies to whom I took my films for finishing. He gave me a penny lecture on the value to me of a good camera. He showed me one with lots of lens-front adjustments and a swanky focusing hood on the back. It was a 9 x 12-centimeter size and the F/4.5 lens looked to me, then, as big as a door-knob. After making a check-list of twenty-eight things to do between pulling the slide and pulling the tab, I sallied out on a trial trip.

I rigged a wooden head and camera screw on my transit tripod—which weighs twelve pounds. With this "Mutt and Jeff" combination I made three shots around my favorite job. Believe it or not, I pulled the slide on all three, and one of them held for over a year the proud position of "The Best Picture I Ever Took". The reason for this is simple: I made it according to directions and got patted on the back for the result. Then I got chesty and started to experiment, and wasted much time and money proving to myself that what was told me was right.

That trial expedition marked the end of my desultory snapshooting days. I bought the camera and a few accessories, such as wide-angle supplementary lens and Rhamstein sky filter. Commercial finishing served my needs for quite a time—and served them well. I should like to voice a protest against the indiscriminate condemnation of "drug-store" service, much of which is being handled by conscientious folk with much pride in their work. I took up my own developing and printing as a natural step forward after I had in some degree mastered the essentials of exposure.

XUM



RESIDENCE AND GROUNDS — FRANCIS W. HUSSEY

I now have reached the place where photography is a handy adjunct to every phase of my work. The paper-hanger similarity has given place to a brief case, with about sixty 8 x 10 enlargements in one pocket, camera and film holders in another, and a metal tripod slid through the straps. No more catalogs with their improbable perfection of plant form and flattering but misleading descriptive matter.

The value of a photograph of a completed landscape design seems to lie in the visual proof that somebody let you try your stuff on his place and liked it well enough to keep the dog tied up when you came around to make a picture. Follow this with details of foliage and flower types and close-ups of walls, steps, flagged walks, and the like, and your prospect may soon be expected to tilt back the swivel-chair and say, "Now on my place ——".

For my personal satisfaction, the possession of a collection of photographs of my work is invaluable. The ability to record in five minutes, by several exposures from different viewpoints, details which might require two hours to sketch and enumerate, is a great advantage. Developing and printing take some time, of course, although it is easy to fit this part of the work into otherwise wasted hours, but—time or no time—did you ever try to decipher cold notes or smudged sketches? New applications of the recording idea crop up on every new job. Recently, I measured up a building by making pictures at right angles to the several elevations and measuring with a rule only sufficient of the prominent features to fix the proportions. A still wet negative stuck on the window beside the drafting table gives all the dope you need, quickly.

I suppose if this article is going to sell, it is high time I wrote something about the pictorial phase of the matter. Here we have material for rhapsody—and comedy. It is fine to be able to hunt out natural examples of your favorite motives. Professor Waugh told us this in the good old days when we roamed through the earthly Paradise that is the Connecticut Valley in spring. I blush when I think how many seasons passed before the idea came home. The comedy comes in when you try to dodge the billboards and high-tension lines. It has also been found by older heads than mine that John W. Homeowner wants his landscaping to show that it cost what he paid for it, and that requirement usually keeps the finished products from looking just so naïvely pictorial.

A word as to materials and methods: I use an Avus 9 x 12-centimeter camera and, as a rule, Portrait Panchromatic cut film, which

latter I buy in 8 x 10 size and cut down myself to reduce expenses. I wish to second everything Mr. E. P. Bullard said about borax developer in his article in a recent issue of PHOTO-ERA MAGAZINE. I have been using it for six months, and only threw away my first batch on suspicion that some hypo had been spilled in it. I use some Portrait Bromide, and much Vitava Projection paper for enlarging. The wide choice of surfaces offered in the latter is very gratifying to anyone who feels obliged to change his mind frequently to keep it from getting rusty. I like Opal, and my desire to use it is a curb on careless exposure and development, since a thin but fully detailed negative is so imperative. I use Azo for contact printing, H being my favorite grade. Its fine grain matte surface records detail nearly as well as ferrotyping stock.

In conclusion, I wish to say a word or two in praise of PHOTO-ERA MAGAZINE. It should stimulate every amateur to further progress. The discussion of competition prints and of general illustrations is especially helpful. I wish data might be required on every picture used.

[Perhaps in no profession is photography of any greater help than in landscape architecture and allied activities. For several seasons we have watched with interest the work of landscape gardening, tree planting and cleaning up which has been going on at summer estates. In many cases photographs have proved of inestimable value in planning the work, carrying it out and, finally, making a permanent record of the completed project. We have seen rough, rock-strewn New England hillsides transformed into attractive rock gardens with pools, miniature waterfalls, little gurgling brooks and pretty stone walks. We have seen unattractive, swampy lake-fronts made over into small lagoons with little bridges and aquatic plants blooming in the quiet waters. Property owners who have such work done would not be human if they did not wish photographs before and after the landscape architect completed his task. Photography has been ready to serve professions and industries for a number of years; but it is comparatively only in recent years that the camera has been taken seriously by those who would benefit most from photography.—EDITOR.]

DETAIL OF FLAGSTONE PATH — FRANCIS W. HUSSEY

XUM

Editors Still Need Photographs

(Second Part)

ROBERT A. BLODGETT

WITH scarcely a word of preamble, let's get right down to business and look over a few more of the inquiries concerning marketability of photographs—inquiries a few others of which were printed in the pages of an earlier issue of PHOTO-ERA MAGAZINE. We'll take, as a starter, this one from a beginner. Let's go!

Q.—DEAR SIR: I read an article recently about news photographs, published in PHOTO-ERA, written by you. I became quite interested, because I am an amateur photographer.

I therefore ask your sincere advice in reference to all information regarding news pictures, how they are obtained, and where they may be sold, and all additional advice which you might have to offer.

A. S. GOLDEN,
Philadelphia, Pa.

A.—DEAR MR. GOLDEN: I think that perhaps the best way of going about the selling of photographs to magazines in the trade field is, unless you're already acquainted with some of them, to examine a few copies of these publications. Your library ought to have some of the different ones. Possibly, too, different tradesmen around your neighborhood who subscribe to such magazines will let you glance at their copies.

If you'll do that—that is, if you'll study these, then you can gain some idea of the type of photographs used. For instance, an automobile trade paper naturally would be interested in unusual automobile pictures. A furniture paper in its turn would be interested only in pictures of news or feature value which would appeal to its specialised readers.

After you've gained some idea of what is used, then you can scout around and get photographs of your own of the type indicated.

And so continues the answer to Mr. Golden. He is informed, among other things, of the various lists of markets which may prove to be suggestive to him. But since these were mentioned in my previous article, I shall not double up by reitemising them. Instead, I'll bring on the next letter:

Q.—DEAR SIR: I propose to photograph some prize-winning cows and chickens at the State Hospital. I can obtain data enough with the pictures to make an interesting article. Please send me a list of magazines which are interested in such matters.

MAX MANNING,
Pendleton, Ore.

A.—DEAR MR. MANNING: Aside from the newspapers which might be listed as possible purchasers of the photographs of prize cows and chickens mentioned in your letter, there's a possibility that some of the following magazines would be interested. Naturally, as you already understand, any particular picture or article should be submitted to only one magazine in the field at a time.

Breeder's Gazette,
Spencer, Ind.
The Bureau Farmer,
58 East Washington Street,
Chicago, Ill.
The Farmer & Farm, Stock & Home,
57 East 10th Street,
St. Paul, Minn.
Farm Journal,
Washington Square,
Philadelphia, Pa.
Poultry Tribune,
Mt. Morris, Ill.
Standard Poultry Journal,
Pleasant Hill, Mo.
Successful Farming,
Des Moines, Iowa.
Wallace's Farmer,
Des Moines, Iowa.

In addition to the above, the Waverly Publishing Company, Waverly, Pa., issues the following: *Rhode Island Red Journal, Plymouth Rock Monthly, Leghorn World,* and *Wyandotte Herald.* Possibly you can get specialised photographs for submission to them.

R. A. B.

Q.—DEAR MR. BLODGETT: After reading your very inspiring article, entitled "Editors Need Photographs", that appeared in the June, 1931, issue of PHOTO-ERA, may I ask you one question?

Are 4 x 6 contact prints large enough for presentation to various trade journals? I mean, of course, all other things being 100 per cent?

I trust that you will continue to write up your enthusiastic articles, as they really are written in a very excellent—hope-giving—style.

W. E. Pierre,
New York City.

A.—Dear Mr. Pierre: While acting as editor of a trade magazine some time ago, I had the pleasure, among other things, of purchasing photographs from various sources. And quite frequently I accepted pictures of the general size which you mention in your letter. Other editors, to the best of my knowledge—when the pictures are truly desirable—will do the same.

However, I think it's probably only fair to state that larger prints, around 7 by 9 inches, such as the publicity bureaus and news agencies sometimes send out, are a bit more satisfactory to editors for reproduction purposes.

Still, when all is said and done, the picture itself is the thing that counts most. Present editors with really worth-while photographs, in the 4 x 6-inch size, and you'll attain some very happy results.

R. A. B.

And still, friends, the letters kept coming in—lots of them, and each one interesting in its own way. Certain ones, such as that from John Sirgo, of La Jolla, Calif., were rather similar in context to some of those already published in this series of articles. Mr. Sirgo, however, mentioned the fact that he has a wide collection of pictures made in the past, including a shot of one of the first women surgeon graduates of the Philadelphia Medical College. The date of her graduation being 1841, and the fact that, as my correspondent says, she still lives and enjoys life, makes her a possible subject for the sale of a picture. Newspapers might, as I suggested to Mr. Sirgo in my letter to him, be interested at the appropriate time. In addition, it's quite possible that certain of the medical or other related trade journals would be anxious to have that particular print.

But here's another letter before me now.

Let's glance at it for a moment before we pass on to what will be the last letter to be reproduced in these pages, in this series of articles at least. Here it is:

Q.—Dear Sir: I was greatly inspired by your article, "Editors Need Photographs", and my hopes are high in the belief that I may raise some extra money to meet the various needs of an amateur, which take all the spare pennies one can afford.

However, I wish to ask for help, and I will outline what I have, what I've done, and what I wish to do.

Photo hobby is a recent one with me . . . and, now that I'm a camera-bug, I try to get pictures that may be used for trade, news, and pictorial publications. My best bet is that I make and set up window displays for the local gas and electric company.

I have been sending photographs to various trade house organs, but, upon inquiry as to money, was usually told that gas companies send in photos for publicity, so that they need not be bought.

I'll certainly be thankful for any help you may give me. "Where and How to Sell Manuscripts"—is that a good book?

John Allen Sable,
Inwood, L.I., N.Y.

A.—Dear Mr. Sable: Extra money does come in handy, doesn't it? From the tone of your letter—including parts not reproduced here—I think that you ought easily to be able to gather in a few of the far-flung shekels if you play your photographic hobby rightly.

And you can do just that if you'll study the markets. You mention "Where and How to Sell Manuscripts". That book gives an exhaustive list of such markets. There's another list, too, published every three months, called the "Manuscript Market Guide", which also has value.

You say that you are in the window display business. That should form an excellent means of getting into the trade journals, especially so if you send in adequate pictures, accompanied by brief articles giving information as to displays and about their pulling power. Interviews with merchants will help you here.

It strikes me as though your best bet would be to specialise in window display pictures of various types—hardware, furniture, pet store, stationery store, etc.—since you should be in a position to be able to find unusual ones frequently.

Do this thing, and you'll find a host of markets. There may be a dozen prospective

XUM

ones for a good picture of the display set up by some progressive restaurant man. And all of these prospects will be glad to see that picture, to purchase it if they can, and to publish it for the information of their readers. Especially so—and you understand that it's unethical to submit a given photograph to more than one magazine in a given field at a given time—if you send along with it a short, pithy, meaty article. Pictures of the men interviewed also help.

Upon getting your list of magazine markets, you can best determine for yourself just which ones you are particularly interested in doing work for. You'll be able to learn, as well, some of the pictorial requirements of these magazines, and, in some cases at least, their rates of payment.

That done, the next step is to study these magazines themselves, to get added hints on slanting your material for them. Then—and you'll be constantly on the outlook for new pictorial material—get your photographs, and if possible your stories, and send them in.

R. A. B.

Now for the last letter that I'll be able to give you at this time:

Q.—Dear Mr. Blodgett: In the June, 1931, issue of Photo-Era Magazine, I read your article, "Editors Need Photographs". The straightforwardness and suggestions in the article aroused my interest in the possibility of finding a market for a series of pictures which I describe as follows:

First. A three-quarter view of a Kerwin grinder, which is used for leveling off rough spots on street-car tracks. The machine was in action when I took it. The men working didn't know that the picture was being taken.

Second. Shows a closer view, and how the man is operating the grinder.

Third. Shows a man with a welding helmet on, welding together the joints of the street-car tracks.

Fourth. Shows a close-up view of how the grinder is grinding the tracks, with the sparks flying backwards. It was taken in the City of Cleveland, on its public square.

The idea of these pictures is to show the public how rough spots in car tracks are removed, which results in making the public's ride a smooth one.

Your suggestion for locating a market for this series of photographs, if its possible to find one for such, will be gratefully appreciated.

Arthur J. Farkas,
Cleveland, Ohio.

A.—Dear Mr. Farkas: Your best bet with the photographs which you described in your recent letter would seem to me to be, at first glance anyway, with one of the following:

Electric Traction,
431 South Dearborn Street,
Chicago, Ill.

Electric Railway Journal,
Tenth Avenue and 36th Street,
New York City.

Even so, since I'm not personally familiar with either of these magazines, I can't give any estimate of what your chances for selling to them might be. Still, if you think the photographs contain sufficient human interest, and depict the situations with unusual clarity, it might be worth your while taking a chance.

Otherwise, I don't know just what to suggest. *Popular Science Monthly* and *Popular Mechanics* might conceivably be interested if your pictures showed something drastically new. The former is at 381 Fourth Avenue, New York City, and the latter at 200 East Ontario Street, Chicago, Ill.

Or again, if you have really novel pictures, perhaps you could interest one of the local newspapers, though I have some doubt as to this. Does the traction company in Cleveland have a house organ? If so, perhaps you might work up a little article concerning the public's point of view of street-car riding, and thus interest them.

R. A. B.

But let's call a halt, and switch over to something else for a few moments. Last month I promised you a list of picture-purchasing periodicals. And here it is. Naturally, because of space and other limitations, it is far from being complete. It's not limited, either, to any particular type, class, or grade of magazine. Only those which definitely state that they buy photographs are in it, regardless of any other question or matter. Use the list wisely, and as you go over it let it suggest new markets. Then get copies

HOOPS

S. W. FRIEDMAN

HONORABLE MENTION—OUR MONTHLY COMPETITION

of those magazines suggested before you even consider sending in photographs; for only thus can you save time, energy, and expense by forwarding to the editors pictures which are really worthy of their consideration. Also, if you can get a larger market list, such as one of those suggested in a former article, study it to find additional magazines in the field in which you are interested.

Accident & Health Review,
Insurance Exchange Bldg., Chicago, Ill.
Aëro Digest,
220 West 42d Street, New York City.
Airway Age,
30 Church Street, New York City.
American Agriculturist,
461 Fourth Avenue, New York City.
American Architect,
57th Street and 8th Avenue, New York City.
American Baker,
Minneapolis, Minn.
American Banker's Association Journal,
110 East 42d Street, New York City.
American Builder and Building Age,
105 West Adams Street, Chicago, Ill.
American Cookery,
221 Columbus Avenue, Boston, Mass.
American Dyestuff Reporter,
440 Fourth Avenue, New York City.
American Forests and Forest Life,
1523 L Street, N.W., Washington, D.C.
Asia,
468 Fourth Avenue, New York City.
Bridge,
19 West 44th Street, New York City.
Canadian Countryman,
204 Richmond Street, West, Toronto, Canada.
Candy,
351 Jay Street, Brooklyn, N.Y.
Child Welfare Magazine,
Market Square, Germantown, Philadelphia, Pa.
Club and Lodge,
35 South Dearborn Street, Chicago, Ill.
Combustion,
200 Madison Avenue, New York City.
Cord Age,
20 West 34th Street, New York City.
Country Home,
250 Park Avenue, New York City.
Crockery and Glass Journal,
45 East 17th Street, New York City.
D. A. C. News,
241 Madison Avenue, Detroit, Mich.
Dairy Tribune,
Mount Morris, Ill.
Dance Magazine,
25 West 43d Street, New York City.
Dental Digest,
220 West 42d Street, New York City.
Dogdom,
612 City National Bank Building, Battle Creek, Mich.
Dream World,
1926 Broadway, New York City.
Drug Topics,
291 Broadway, New York City.
Dry Goods Economist,
239 West 39th Street, New York City.
Electric Refrigeration News,
554 Maccabees Bldg., Detroit, Mich.
Enamelist,
2100 B. F. Keith Building, Cleveland, Ohio.
Engineering News Record,
10th Avenue at 26th Street, New York City.
Excavating Engineer,
South Milwaukee, Wis.
Explosives Engineer,
Delaware Trust Bldg., Wilmington, Del.
Export Trade and Finance,
20 Vesey Street, New York City.
Extra Money,
500 North Dearborn Street, Chicago, Ill.
Farm Journal,
Washington Square, Philadelphia, Pa.
Farm Mechanics,
407 South Dearborn Street, Chicago, Ill.
Fish and Oyster Reporter,
1123 Florida Avenue, Tampa, Fla.
Footlights and Shadows,
3011 North Nagle Avenue, Chicago, Ill.
Ford Dealer and Service Field,
129 Michigan Street, Milwaukee, Wis.
Furniture Age,
2225 Herndon Street, Chicago, Ill.
Furniture Record,
200 Division Avenue, North Grand Rapids, Mich.
Gas-Age Record,
9 East 38th Street, New York City.
Girlhood Days,
8th and Cutter Streets, Cincinnati, Ohio.
Golfdom,
236 North Clark Street, Chicago, Ill.
Golf Illustrated,
425 Fifth Avenue, New York City.
Good Hardware,
79 Madison Avenue, New York City.
Greater Show World,
1547 Broadway, New York City.
Hand-Bag Modes,
1181 Broadway, New York City.
Heating, Piping, and Air Conditioning,
1900 Prairie Avenue, Chicago, Ill.
Highway Maintenance,
P. O. Bin NN, Taft, Calif.
House Furnishing Review,
30 Church Street, New York City.
House and Garden,
420 Lexington Avenue, New York City.
House Beautiful,
8 Arlington Street, Boston, Mass.
Ice Cream Review,
Fifth and Cherry Streets, Milwaukee, Wis.
Industrial Engineering,
7 South Dearborn Street, Chicago, Ill.
Japan,
551 Market Street, San Francisco, Calif.
Jewish Tribune,
570 Seventh Avenue, New York City.
Kennel Review,
Suite 201, Burns-Davis Bldg., Glendale, Calif.
Locomotive Engineers Journal,
1105 B. L. E. Building, Cleveland, Ohio.
Luggage and Hand Bags,
1181 Broadway, New York City.
Macaroni Journal,
Braidwood, Ill.

Manufacturers' News,
120 South La Salle Street, Chicago, Ill.
Marine Journal,
5 Beekman Street, New York City.
Milk Dealer,
Fifth and Cherry Streets, Milwaukee, Wis.
Modern Education,
2046 East 71st Street, Cleveland, Ohio.
Motor Boating,
57th Street and 8th Avenue, New York City.
Municipal Sanitation,
24 West 40th Street, New York City.
National Geographic Magazine,
Hubbard Memorial Hall, Washington, D.C.
National Laundry Journal,
461 8th Avenue, New York City.
National Police Gazette,
Franklin Square, New York City.
New England Homestead,
Myrick Building, Springfield, Mass.
Neckwear,
114 East 32d Street, New York City.
Office Economist,
Jamestown, N.Y.
Our Dumb Animals,
180 Longwood Avenue, Boston, Mass.
Outboard Motor Boat,
521 Fifth Avenue, New York City.
Picture Play Magazine,
79 Seventh Avenue, New York City.
Pipe Line News,
1217 Hudson Boulevard, Bayonne, N.J.
Popular Mechanics Magazine,
200 East Ontario Street, Chicago, Ill.
Popular Science Monthly,
381 Fourth Avenue, New York City.
Power Boating,
West 3d and Lakeside Avenues, Cleveland, Ohio.
Power Wagon,
536 Lake Shore Drive, Chicago, Ill.
Progressive Grocer,
79 Madison Avenue, New York City.
Restaurant Management,
40 East 49th Street, New York City.
Save the Surface Magazine,
18 East 41st Street, New York City.
Shoe Merchandising,
210 Lincoln Street, Boston, Mass.
Soda Fountain,
420 Lexington Avenue, New York City.
Sportsman,
60 Batterymarch, Boston, Mass.
Spur,
425 Fifth Avenue, New York City.
Store Equipment and Supplies,
236 North Clark Street, Chicago, Ill.
Tatler and American Sketch,
331 Madison Avenue, New York City.
Taxi Weekly,
54 West 74th Street, New York City.
Tobacco,
10 East 39th Street, New York City.
Toilet Requisites,
250 Park Avenue, New York City.
Travel,
7 West 16th Street, New York City.
Underwood and Underwood,
417 Fifth Avenue, New York City.
Vanity Fair,
420 Lexington Avenue, New York City.
Wallace's Farmer,
Des Moines, Iowa.
Watch Word,
Elgin National Watch Company, Elgin, Ill.
Western Paint Review,
312 East 12th Street, Los Angeles, Calif.
Woman's Farm Journal,
Berne, Ind.
Wood Construction,
Xenia, Ohio.
Your Home,
1926 Broadway, New York City.
Youth,
Unity Building, 917 Tracy Avenue, Kansas City, Mo.

Photographing Church Babies

LEE McCRAE

TO make a good living with a camera—and nothing else—in times like these is an achievement. But it is being done here in Southern California by a young couple who are using an original plan and following it energetically.

Instead of renting an expensive, centrally located studio, furnishing it attractively, and then sitting down to wait the coming of patrons, they have literally gone after their trade. This is the mode of procedure:

On Sunday mornings they visit an organised Sunday-school, requesting to meet the Cradle Roll superintendent. In the largest schools she is there at the time, surrounded by the children of pre-school age in a room of their own, which also serves as a nursery during church services. In a private interview they suggest that the department have photographs of the class grouped together in one large frame, representing the Cradle Roll of that year, offering to donate the pictures if provided with the names and addresses of the wee ones.

As there is absolutely no cost to the school and the grouped pictures will be both interesting and of historic value to the church, the superintendent gladly assents and supplies the roll, often adding her own card for presenting to the mothers as the photographer goes from home to home to make the photographs.

The photographer first calls a mother by telephone, explaining the plan, and asking permission to come to the house at some convenient time to photograph the child in its familiar surroundings. Always the mothers are pleased, arrange for a prompt sitting, and have the little one ready when he arrives.

To pose a baby naturally is easy, if its own toys, special chair, or wagon is used. The photographer has studied pretty, unusual attitudes, and uses devices such as flowers, bright-colored fruits, pet animals, and loved objects to give animation and secure happy expression. The background of the home porch or garden or front walk also adds to the charm of the picture, so that the results are invariably good—so good that when the mother is shown the print, she always wants from one to half-a-dozen copies, at twenty-five cents apiece. Then, if particularly good, she often orders an enlarged one, frequently asking that it be tinted and framed as a gift for the father or grandparents. That, of course, is where the young photographers' profits come in, as the first print is to be given, as promised, to the Cradle Roll superintendent. The tinting is the special job of Mrs. Photographer, and she is rapidly excelling in the art.

The superintendent or school is usually glad to pay for the large but simple frame in which the postcard pictures are placed, each frame holding from eighteen to twenty-four. Beneath each, the child's name is carefully printed, and its age.

The originators of this idea have gone about the work so systematically and enthusiastically that they now have 126 Cradle Rolls photographed for that many schools; and already they are beginning to make the second round, since each year has its new "class" that must not be slighted. Thus they find themselves in a *regular job,* with Sunday-schools of all denominations to visit in all the cities and towns of Southern California. Their expenses consist merely in photographic materials and gasoline and upkeep for a speedy little roadster. The development of the negatives and all finishings are done in their own little home, and, although amateurs to start with, they are really amateurs no longer.

"And we are meeting and dealing with the best people, the most reliable people, in each community", they assert. "Besides, picturing pretty babies in cunning poses is a fascinating task."

[These are the times when we are all eager to find ways and means to make ends meet. The established methods of earning money have been affected by conditions over which most of us have had no control. In short, if the beaten paths yield no return, it has become a question of striking out into virgin territory. It is apparent from Mr. McCrae's article that there is still new ground open to those who can find it. This case further proves the fact that often there is a great opportunity in a special field when it is worked intelligently and tactfully. Not every young couple can make a success of photographing babies; but many can find an idea and encouragement in Mr. McCrae's little story.—EDITOR.]

METHOD OF USING CAMERA JAMES S. FASSERO

Through the Telescope

JAMES S. FASSERO

WITHIN the last few years a surprising number of persons both young and old have adopted telescope making and Astronomy as a hobby. Most of this group, I believe, have not even thought of combining their instrument with a camera, to photograph celestial objects. The photographic plate has almost infinitely increased the value of astronomical instruments in research work. It is true that for this kind of work the instruments must be of the best quality, usually out of reach of the amateur. There are, however, two objects in the sky which can be satisfactorily photographed with an ordinary camera and the average amateur telescope, *i.e.*, a fairly good reflector with an aperture of between 6 and 12 inches, but not driven by clockwork. These objects are the sun and the moon.

Celestial objects appear to move due mainly to the rotation of the earth. When such objects are viewed through a telescope, this motion is magnified proportional to the power of the instrument. The image will therefore move fairly rapidly across the film or groundglass when a camera is placed at the eyepiece. That is, of course, speaking of the simple instruments not equipped with clock drive to follow the celestial objects.

Due to this motion, then, exposures of more than $\frac{1}{2}$-second are out of the question. The sun and the moon are therefore the only objects bright enough for such an exposure.

The illustrations show how the camera was held to the telescope and the results obtained with different exposures and different image sizes. It is evident that if the image is made larger by changing the eyepiece, the exposure must be increased. The best results I

XUM

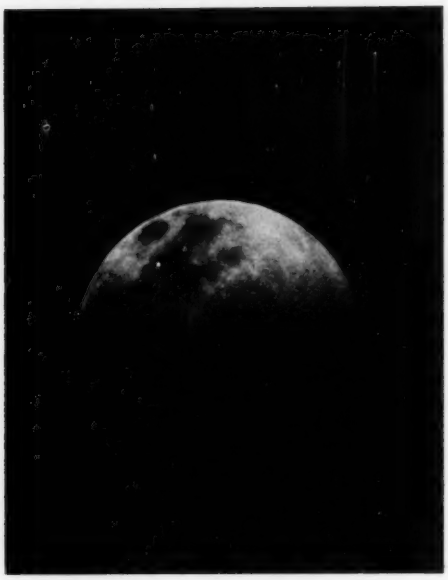


FIGURE 1 JAMES S. FASSERO

obtained with a 9-inch telescope was with an exposure of 1/5-second and an image 2½-inch diameter. The eyepiece used made the power of the telescope 120x. I used a Voigtländer Avus camera. I did not remove the lenses but focused on the groundglass with the eyepiece of the telescope. I found that I could vary the size of the image by varying the distance of the camera lens from the groundglass, the image becoming smaller as the lenses were moved toward the glass.

If the camera is not equipped with a groundglass a clear picture may be made by first focusing the telescope visually at some distant object such as the moon or stars, then setting the camera at infinity or 100 feet and putting the camera lens next to the eyepiece as shown in the photograph. In this case the size of the image can be changed by changing the eyepiece of the telescope. If an eyepiece of shorter focal length is used the size of the image will be increased proportionally; therefore the exposure must also be increased.

This is, of course, a very crude way of photographing celestial objects but it is a good starter for the amateur. I am now trying two improvements. The first is to build some sort of brackets or clamps to hold the camera rigidly in place on the tube of the telescope. Second, I think that a better image can be obtained if the lenses of the camera are removed and the focusing done with the eyepiece. This will require a camera with a groundglass.

Since I made these pictures, higher speed films and plates such as the Hypersensitive panchromatic have been put on the market. If these are used the picture may be made with a shorter exposure or with a smaller telescope.

Following this same general method, very interesting pictures of sunspots may be made. These will involve different exposures, higher magnifications and stopping down the aperture of the telescope. This should not be done with the diaphragm of the camera. A cardboard with the right sized opening should be placed in front of the objective of the telescope.

[Thanks to the co-operation of several contributors we expect to present some practical articles on amateur astronomy with a camera. This material will appear in time to prepare our readers for the eclipse of the sun which is to take place in August, 1932. There is marked interest in the eclipse and doubtless a larger number of amateur photographers than ever before will make pictures of this celestial phenomenon.—EDITOR.]

FIGURE 2 JAMES S. FASSERO

The Photographic Adventures of Bert and Ray

XXXII—The Making of Lantern Slides

NEIL WAYNE NORTHEY

"I CAN'T understand why I haven't thought of making lantern-slides before this", said Ray, as he went through his negatives and picked out the ones which he intended to use in the near future.

"Nor I", said Bert. "I never thought of it until we projected those distorted prints for the crowd to guess at the stunt party. Then it occurred to me that we might make slides from some of our best negatives and show them some time."

"Yeh, and especially since we have them doctored up so they will print to the best advantage", said Ray.

"I think that after I pick out the ones I want, I'll sort them according to density just as I would if I were making prints", said Bert. "It will be easier to judge exposure after I find out the exposure time for each group."

"You know, I believe it would be better to make all of the exposures with the enlarger, even though we could make most of them by contact just as if we were making prints", said Ray.

"Why is that?" asked Bert. "My Kawee negatives are just about the right size, as they are for contact printing; but, of course, it might be that some would not stand so much masking."

"Even though they would, there is the danger of scratching and making other blemishes if we do contact printing. And the least scratch would show up something fierce when the slide was projected. By using the enlarger, we can either enlarge or reduce to the exact size we want without masking off part of the pictures or having some of them small, and it eliminates the danger of scratching the lantern plate, as can easily be done if there happen to be foreign particles between the plate and the negative when they are pressed together in a holder for contact printing."

"That's right", said Bert. "Here's a Kawee negative that I wouldn't want to mask at all. The standard size of a slide mask is three by two-and-a-quarter inches, and that is about half the size of this nine-by-twelve-centimeter negative. And here is one that would make a dandy slide by enlarging a little space out of the middle of it."

"It's the same with these Three-A's and these four by fives", said Ray. "After we get these sorted according to printing quality, it would help a lot if we sort them according to size, so that after we get the enlarger adjusted for one size we can print all of them before we have to adjust it for another size."

"I supposed we should have to rig up a special reducing printer", said Bert.

"So did I until I talked with Mr. Harley", said Ray. "All we need to do is to put the negative in the enlarger just as we should do if we were making an enlargement, and project it onto a piece of white cardboard in a printing-frame setting out in front against some stationary object. When we have it in sharp focus and the image the size we want, we remove the cardboard, put in a lantern plate with a mask in front of it, and set the printing-frame back exactly where it was while we make the exposure. But Mr. Harley cautioned me to see to it that the negative and lantern plate were dustless, and that the focus was perfect, because any imperfections or lack of focus would be greatly magnified on the screen."

"It was nice of him to lend us this lantern for trying out the slides as we finish them, so we can tell how to improve them as we go along", said Bert.

"Yeh, I wouldn't know a good slide if I saw one", said Ray. "And besides, I don't want to go ahead and finish any that are no good, or which might be improved by a little reduction or intensification."

"Or spotting", added Bert. "We'll have to touch out the pinholes and such things before putting on the cover-glass."

For those who may not know, the cover-glass which Bert referred to is merely a piece of thin glass the exact size of the lantern plate, *i.e.*, 3¼ x 4 inches, which is used to protect the lantern plate's emulsion by placing it over the emulsion side, with a mask of the proper size between, and binding all together with strips around the edges. The boys had bought but a few of the cover-glasses, for they expected to clean the emulsion from the lantern plates that they spoiled and use them for cover-glasses. But that is running ahead of our story.

XUM

When the negatives had been sorted, Ray brought out the enlarger and set it up ready for the first exposure. A normal negative was placed in the carrier for a trial exposure, the first lantern plate being exposed in three strips of different lengths of time by covering part of it with a piece of cardboard.

"I hate to waste a plate this way", said Ray. "But Mr. Harley said that is the only way to find out the right exposure to give. You see, the amount of exposure to give depends upon the amount the negative is reduced or enlarged, and upon the size of the diaphragm, and upon the character, color, and opacity of the negative, and how strong the light is. We can always use the same light, and also the same stop. Or at least we can figure from the same stop. It's a good idea to use a fairly small one to get sharp definition in case we fail to focus exactly. And then we have contrasty and normal plates, or, in other words, we might say 'slow' and 'slower' in printing speed, except that the slow ones are for thin negatives, which make up more or less for the slowness of the plates."

Bert and Ray had one advantage, and that was in the friendly help and information that was always available in Mr. Harley. Whenever something new was to be attempted, they first paid a visit to Mr. Harley's photo-supply shop for material and advice. And so it was that when they were ready to make some lantern-slides, they could go ahead with the work with few mistakes. For the benefit of those friends of the boys' who have never made lantern-slides, a peek into their workroom notebook, containing the process as outlined by Mr. Harley, might be interesting. Here are the notes in Ray's abbreviated style, giving the various steps, but no doubt complete enough to enable others to make lantern-slides without trouble.

"*Printing.*—May be done by contact exactly as a developing-out print is made, if the negatives are of a suitable size; or by projecting in an enlarging or reducing camera.

"*Exposure.*—Best determined by trial for the first negative. Best to risk under- rather than over-exposure, as dense slides will not project unless they are reduced.

"*Development.*—Try to keep the tones even in all slides, as otherwise they will not be pleasing when projected. Overexposure and underdevelopment give flat, gray slides. To reduce contrast, give more exposure and shorter development, or dilute the developer. The tone of the slides depends upon the exposure and development given. Warm tones result from increasing the exposure and using a restrainer like potassium bromide. This has the advantage of producing pure color throughout the entire image, in the deep shadows as well as in the faint highlights. Slides should not be as hard and strong as negatives.

"*Clouds in landscapes.*—May be obtained by printing clouds from a cloud negative on a lantern plate, which is then bound face to face with the landscape slide and used as a cover-glass. If clouds in the cloud plate overlap the landscape, remove them with reducer applied with a tuft of cotton. Both plates should match in density.

"*Fixing.*—After development, rinse thoroughly and then fix well in an acid hypo bath. If slides are to be colored, fix in plain hypo containing 2.5 per cent sodium bisulphite. Leave in fixer as much longer as is required for the milkiness to disappear. In hot weather, before fixing, harden two or three minutes in a solution made by dissolving an ounce of potassium chrome alum in 32 ounces of water. Wash 10 to 15 minutes in running water after fixing, swabbing off surface with a tuft of cotton to remove particles that might be clinging.

"*Clearing Bath.*—Not necessary in all cases, but likely to improve all slides. Necessary if slides are inclined to dry with a veil. Make a saturated solution of alum and another saturated solution of citric acid. Take 4 ounces of each and add 1 dram of hydrochloric acid. After the slide has been fixed and washed, flow this solution over it in a tray and rock constantly for two minutes. Then remove and wash ten minutes in running water.

"*Drying.*—Remove drops of water by dabbing with a soft cloth to prevent drying marks. Dry in a dustless place where lint and dust particles will not settle on the emulsion.

"*Spotting.*—If spots occur, they may be touched out with spotting colors and a spotting brush.

"*Coloring.*—Slides may be stained or toned or hand-tinted, according to the instructions given with those products. Use a good grade of strong and brilliant color which will not fade in the intense light of the lantern.

"*Intensification and Reduction.*—Examine the slides in a lantern to see how they project. If too dense, reduce in a solution made

of 5 grains of permanganate of potassium in ½-pint of water, using it in a diluted form of 1 ounce of this solution to 5 ounces of water, to whic'ı 4 minims of strong sulphuric acid has been added. Pass the slide through the diluted solution for about 1 second; then wash in fresh water, repeating until the slide is sufficiently reduced. To intensify, soak in a dye bath, or use an intensifier, or color by hand.

"*Varnishing.*—When the slide is ready to be covered, heat somewhat to remove all moisture, let cool, then varnish it with lantern-slide varnish to prevent its absorbing moisture from the condensation on the cover glass. Not absolutely necessary, but adds to the keeping quality of choice slides.

"*Masking.*—Use care in masking, that the composition of the slide may be improved as much as possible. Masks should have clean-cut edges, as the smallest imperfection will show when enlarged on the screen. Keep masks wide enough around the edge, so that the slide-carrier in the lantern will not cut into the picture. Write title and other information on the mask with white ink before applying the cover-glass.

"*Binding.*—Spoiled slides may be cleaned and used for cover-glasses. Dust slide and cover-glass by tapping their edges on the table. Use a sponge soaked in a solution of glycerine 1 part and water 8 parts, to moisten binder strips so they will be flexible. Place the moistened binder strip on newspaper, gummed side up, and rest one edge of the slide, with its cover-glass and matt in position, in the center of one end of the strip. Turn the slide edgewise along the matt so that another edge rests on the strip, continuing until the four edges have been fastened, creasing and folding the binder as each edge comes up. Paste a small gummed sticker to the lower left-hand corner of the slide when it is held as it will appear on the screen. This is used for numbering the slide and to show the operator which way to place the slide in the lantern. Store slides in a warm, dry place."

Of course, there is much more to be said about developers and the development of slides, and about tones and toning, and about other things. But so far as Bert and Ray were concerned, they were contented to follow the instructions that came with the lantern plates for their first work—which, after all, is usually a wise thing to do.

(*To be continued*)

The Writer and His Camera

J. E. BULLARD

THE writer, whether he writes feature articles or fiction, must be gathering material constantly. In one way or another, he must record this material in such a way that he can use it when he needs it. He may take copious notes and make sketches, or he may rely to a very great degree upon his memory. In either case, he may find when he gets around to use the material that some of the essential facts are missing. There was something he did not notice or that he failed to write down or sketch. The material does not prove to be as valuable as he expected it would be when he obtained it.

To add to his difficulties, conditions are constantly changing. What would sell readily last year may not sell at all this year, and next year something entirely different may be in demand. Even though he makes a note or a sketch of everything that he believes he can use, it may happen that next year the material would be very much more valuable had he recorded something which he noticed at the time but considered of relative unimportance.

There are two types of material a writer must gather. One is what he hears. This must be written down, for the reason that there is not yet any light portable device which one can carry in his pocket and which will record with accuracy any conversation and reproduce it when wanted.

The other is what he sees—and much of the material used by a writer comes to him through his eyes. In fact, this may prove of the most value to him. A certain writer wrote a feature story about a department in a large store. He mailed the manuscript to the buyer for his approval. A few weeks

XUM

later he saw this buyer again and asked him if he had shown it to his superiors, and what they thought of it.

"No", he said, "I did not show it to them. I read the story through, and it seemed satisfactory to me. As there was nothing in it but what you could have learned by just looking around in the department, there could not be anything in it to which they might object, and as they were busy I did not bother them."

This indicates to how great a degree a writer may more or less unconsciously rely upon his eyes. In this particular case, the buyer had called the attention of the writer to a number of things; yet all of these things were in plain sight, and a few good photographs of the department would have been all that was needed to write the article. The photographs would have contained all the material that was required.

Fiction writers are constantly running across characters which impress them and which they plan to use in a story at some time. When that time comes, however, the memory has dimmed, and it may not be so easy as might be to describe these characters in the most satisfactory manner. What a difference a photograph or a whole group of photographs would make in this case!

For such reasons as these, the writer is finding that he is virtually being forced to more and more use of photography. In the past, however, there has not been just the type of camera which would serve his purpose best. The first requisite, of course, is that the camera be small in size and light in weight. The smaller and lighter it is, other things being equal, the better.

The second requirement is that it cost as little as possible to operate. If each picture made costs several cents for the negative, then economy requires that as few as possible of the exposures be wasted ones. This means that it is likely to be a case of making too few pictures.

The third requirement is that the camera be as near universal in use as is practical. It should have a very rapid lens. In some cases it is desirable to have interchangeable lenses of different focus. If a writer takes a flight in an airplane and snaps some pictures of the ground, he needs to have a long-focus lens. If he is making pictures of window displays, he needs a short-focus lens. For most other purposes he may find a lens of standard focus entirely satisfactory.

The faster the lens, the less he has to depend upon portable artificial sources of light, and probably find that when he wants them most he hasn't his flashlight gun or his photobulb apparatus with him. One of the greatest advantages of the small camera is that such fast lenses can be obtained for it and that these lenses have such a depth of focus.

After completing an article and sending it out, I was frequently informed by the editor that he could use it, but that he must absolutely have photographs to go with it. The editor referred to pays ridiculously low prices for photographs, because he has found that in nearly every case the firm about which the story is written will supply all the photographs desired. The particular firm in question, however, proved an exception. Business was bad, and it was cutting expenses to the bone, and the suggestion that it hire a photographer to make the photographs would not have been entertained for a moment. The little camera, however, solved the problem.

Placing my Leica and tripod in the car, I stopped at the plant on my way home from down town. With the lens opened to F/3.5, there was no difficulty in obtaining satisfactory action photographs, the kind that pleased the editor, and the entire negative cost was not as much as the cost of one Photoflash bulb. None of these pictures could have been made with a 5 x 7 view camera without using one or more flash bulbs for each exposure; but the 5 x 7 prints made from the Leica negatives were entirely satisfactory, though no special lighting of any kind was used and all the exposures had been made in about the time it would have taken to set up the view camera for one exposure.

Any small camera will serve the writer well as a notebook that records every minutest detail in what is seen. To save time and to make many photographs possible which otherwise could not be obtained, however, it must have a fast lens. A cheap box camera is not at all satisfactory as an all-round notebook.

Such a camera as the Leica, which has a full set of interchangeable lenses, is entirely satisfactory for the reason that it is about as close to being a universal camera as can be found. It is also an extremely well constructed one; and, if fine workmanship is needed in any camera, it most certainly is needed in the midget sizes, where enlargements of many times are to be made from the negatives.

MYSTERY OF THE WILD
VINCENT H. HUNTER
HONORABLE MENTION—OUR MONTHLY COMPETITION

The modern writer must have a good typewriter. He cannot afford to buy the cheapest machine he can find. He cannot afford to continue to try to get along with a typewriter that has seen its best days and is constantly breaking down. He spends the money that is necessary to buy the typewriting machine which he finds is best suited for his particular purpose. If he follows any other course, he finds that he does not earn so much money by writing.

In the same way, the modern writer is coming to find that he must equip himself with the camera which will best meet his needs. It is not so much the first cost of the camera that counts as it is what that camera will do for him. Different writers have different requirements and for that reason may need different cameras; but it is becoming more and more obvious that the small camera is the better camera for every writer. There is no sense in carrying around a heavy, bulky camera when one that can be carried in the pocket will serve the purpose as well and in some cases much better, because pictures will be obtained that could not have been made by the larger camera.

Personally, I have found the Leica to be the best camera for my own personal purpose. There is one advantage to this camera and, of course, to any that uses motion-picture film, which I discovered only by accident. On a recent short trip I made a hundred pictures. These varied all the way from pictures that were made for the purpose of notes in preparing articles to scenes which I expected to use for illustrating travel articles I had in mind. After making 4 x 5 prints from the negatives, I found it difficult to recall just where some of the pictures were made. Had the film been cut up into individual negatives, as has been my custom with the hand cameras I have used in the past, it would have been no easy matter to have made sure about these pictures. However, the hundred pictures had been made on three strips of film, each five feet long, and these strips had not been cut up, because it is so much easier and quicker to make the enlargements from these little negatives when they are all together in a strip.

Looking through the strips, I found enough pictures on each one which I did know about to give me all the information I needed for those about which I was not certain. The long strips which are never cut, in other words, serve pretty well as a notebook in themselves. It is usually possible to remember enough about the pictures so that it is not necessary to make notes about them. Besides, when one is making the photographs from the window of an automobile that is traveling anywhere from thirty-five to fifty miles an hour, and wants to get all the pictures he can, there is not much time to make notes, and the car is not any too good a place to make notes in. Some of these pictures were made in just that way.

Some of the things that the writer will photograph when he becomes accustomed to using his camera as a notebook are the interiors and exteriors of buildings; the person or persons he interviews; close-ups of anything of special interest—machinery, scenery, people who prove especially interesting for any purpose; documents, parts of which, otherwise, would be copied; pictures that may be wanted to illustrate the article or story, such as photographs of paintings, which the person interviewed may have but which he desires to keep in his possession; advertising matter of which there is but the copies which have been pasted in the scrapbook; window displays; store displays; implements of one kind or another; outdoor advertising signs; electric signs at night; illuminated buildings at night, and anything else which he feels will prove of value to him later. All these negatives contain information of value, and frequently they mean that illustrative matter is available which it would not be easy to get in any other way. I have waited for months for illustrative matter that I could have obtained on the spot with a little camera, but which I could not have obtained with a big outfit.

[Those of our readers who are interested in the miniature camera will find that Mr. Bullard has answered a number of questions in his article. The professional writer has no time to do much experimenting. He must have results.—EDITOR.]

Finding Beauty Where You Are

THOREAU had a preference for his own little village of Concord. The Atlantic did not impress him. It was to him simply a large Walden Pond. When someone gave him a book on Arctic voyages, he returned it with the remark that all of its phenomena could be observed in Concord. Concord, with its Bateman's Pond, its Nine-Acre Corner, and its Becky Stowe's Swamp, contained, for Thoreau, all of the ingredients necessary for a full and varied life. We must learn to find beauty where we are. Exchange.

My Photographic "Career"

MITCHELL W. ALLEN

I COMMENCED my photographic "career" at an early age, and, like most photographers, recall that my first pictures were made with a Brownie. This No. 3 Brownie had seen considerable, and very successful, use in the hands of my father, who, while not pretending in any way to know the secrets of photography, turned out snaps and indoor exposures many of which I doubt being able to equal with my bigger and better equipment and knowledge of today.

My mind at that time was for the most part on things other than pictures. When it seemed desirable and proper, the Brownie would be trotted out and a shot of the girl across the street or the family dog or some of the gang was made—but none of these pictures could by any stretch of the imagination be classed as pictorial. Even then I did my own photo-finishing, using a Kodak film tank and printing with a frame held before an electric light globe. My tendency in printing was toward an extraordinary light key, I apparently being unable to judge density accurately in the darkroom. However, I defended my seeming inaccuracy vigorously, insisting that the light prints were the more artistic.

Cameras were acquired and traded off in rapid succession. One of the earliest was obtained, I think, as the result of securing subscriptions to some magazine, a Double 0 Premo, making pictures approximately the size of a stamp. And how that film would curl! I believe the little box then retailed for seventy-five cents, but I did manage to get some good pictures with it. Soon it was forgotten or lost—or perhaps given to my younger sister—in the excitement of acquiring a brand-new vest-pocket Kodak, which was my pride and joy until it was traded in on a 4 x 5 filmpack Premo. With this larger size apparatus, my interest in photography as photography was aroused, and I began taking photographic magazines, and reading up on various branches of the work—but all to no avail, for the spasm passed, and I was interested in other things. Then came high school and yet other interests, with now and then a little attention being given to picture-making. After my second year of high school, I secured a job during the summer vacation.

There were so many applicants for this position that the boss let his secretary choose, and she picked me—think what you like! The firm was a commercial photographer's in San Francisco, and my job was a little of everything—mostly running errands, delivering orders, mixing solutions, squeegeeing glossy prints, and washing ferrotype tins after paste had been used on them—how I detested that job! Also, the printing of postcards by the thousand—a tedious, tiresome job—and, sometimes, the printing of the few rolls of Kodak photo-finishing that found their way to us. Here was my chance to learn much, and to my present regret I learned very little, although I did pick up a general knowledge that stood me in good stead later.

One event that stands out in my memory is the visit of President Wilson on his tour of the country after the World War. We had the exclusive rights to his pictures, at the Palace Hotel and Civic Auditorium. We made some fine pictures of the banquet at the Palace Hotel, and had huge enlargements at the door of the banquet room before the banquet was over, taking orders for prints. But the excitement occurred at the Civic Auditorium.

We went there early on the afternoon of the evening the President was to speak, and laid wires for the flash bags which were hung along the front of the balcony. We were still there at six o'clock when they opened the doors to the thousands who had been waiting there for hours, and the crowd rushed in. We never did know what happened, but guessed that the mob in rushing to their seats stepped on the wires and in some way shorted them, with the result that all of our flashes went off prematurely. It was impossible, on account of the crowd, which was then jamming the aisles, to get to the bags and refix them, so a hurried trip was made to the studio, and open flashpans were brought back. How we were searched by the secret service men, how we crawled under a temporary platform and through the telegraph room, up to the organ loft behind the speaker's platform, will always stand out in my memory. There we made two flashes showing the President speaking before the vast crowd, and, rushing back to the studio, made enlargements of them, joined them together to make one

whole, and had them at the newspaper offices before the papers went to press.

After about a year of this interesting work, I went back to high school. But I was a photographer then. I managed to obtain the post of school photographer, and got the use of the school camera, a rickety old Pressman reflex fitted with an F/4.5 lens; also the use of the school darkroom, which I used solely for changing plates, having better equipment at my home. I specialised in stage pictures, and got some really fine flashes of the many plays that were given by the school dramatic workshop. My only regret was that, being the photographer, I was unable to make my own picture, as I was in practically every play given. However, the sale of pictures netted me quite an income, so that my artistic soul was appeased to that extent.

About this time a plausible gentleman living near my home managed to sell me—it wasn't a particularly hard job, I'm afraid—a 5 x 7 plate camera of unknown origin, with a rapid rectilinear lens of the same parentage, and a miscellaneous assortment of junk, most of which could not be used with the outfit. I tried to return it later, having found out its real worth, but met with a lawsuit, which was finally settled out of court by my paying about one-fourth of the original purchase price, which was plenty even at that. However, one could make 5 x 7 pictures with it, and I got some creditable group and class pictures for the school annuals.

Then I entered Big Business. A high-school chum of mine and I decided to form a photographic firm of our own and become rich. So the firm of Allen and Gary, photographers, was formed, of which I, being the only "professional" in the firm, was "President and General Manager". We had cards printed, purchased additional equipment, and waited for business. Business was slow in coming, and, as my partner was for the most part an onlooker, the few times we had work to do, his interest waned and he sold out to me. I started in with a bang, under the fanciful—and original—name of The Crescent Can'rography Company, putting up quite an advertising display in the corner grocery store, as I was still President and General Manager, according to the business cards. My first job from this source, however, almost put me out of business. I had a twelve-exposure 3-A film to photo-finish, and began developing the film by the tray method, holding the two ends of the film in my hands and pulling it through the tray. On one of the many trips upward with my hand, I hit an electric light globe which had been unscrewed a trifle to make the room dark, it flashed on, and the film was spoiled.

During this time I acquired an Ansco Vest-pocket Special with focusing lens, which I prized and kept for a number of years. Some of my other cameras were traded in on a 3-A Kodak Special, which soon went in on a special Sagamore—I think it was called—size 3¼ x 4¼, a little beauty which many times I have wished had been kept. However, it soon went the way of the others, and I became the proud possessor of a 3¼ x 4¼ Revolving Back Graflex with F/4.5 lens. About this time also I got, in some way, a 3¼ x 4¼ folding Ansco with F/7.5 lens which I have to this day, although it is practically never taken from its case.

Then I went to college, where I became the official college photographer, which practically paid my way through school. I was given a room in the basement of the science building, which had a distressing habit of acquiring three or four inches of water on the floor at odd times when the drainage system of the building would clog up and overflow through my sink. I overcame this disadvantage by building a false floor in the room, allowing space underneath for the water when it saw fit to enter my domain. Here I spent many hours of my college life, a good number of them above three or four inches of water, for the room drained and dried out but slowly. Why I didn't catch cold or something worse and most of my materials spoil will ever be a mystery to me.

I had a monopoly on the Kodak finishing for the students, the college bookstore handling all my work, and I did all the advertising and athletic work for the college, for all of which I was paid my own price. At this time also I had a 5 x 7 view camera with an F/6.3 lens with which I took classes and groups. I made hundreds of pictures of campus events, football games, teams and players, plays and functions, prints of which I kept in albums in the bookstore, from which the students ordered by number.

One of my best strokes of business was on the return of our track team from the East, where they had won the Penn Relays. They had made dozens of pictures, and it seemed that all of the students wanted copies. I got the job of making all the prints, which ran into the thousands, at a reduced price, and,

even at that, I made money. I don't remember how many hours were spent on this one job, but there were many, orders on some of the negatives totaling more than a hundred.

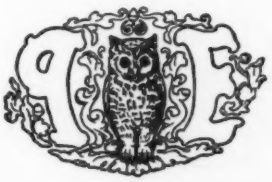
On one flashlight picture I could have made a small fortune, but the executive council would not let it become public. That was a picture of the "Return of the Senior Bench", which had been missing mysteriously from the campus for several weeks. It was brought back one dark night in a small Ford truck by a group of lower classmen wearing bandana handkerchiefs for masks, and the flashlight of bench, truck, and truckmen was a beauty.

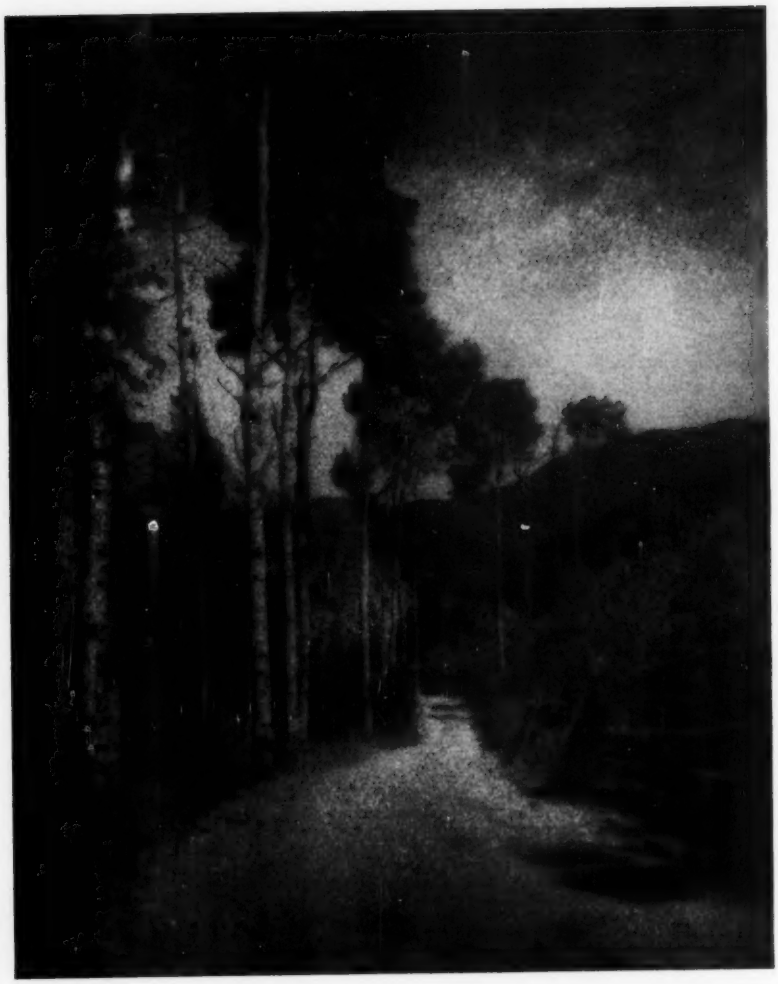
I achieved some rather pictorial views of the campus, but neglected entirely the many wonderful chances for pictorial photography in a beautiful scenic region and the many opportunities for striking portrait work among the students. I would give a great deal now to go back and relive my college days, even with the identical equipment I had at that time.

However, the years were passing, and it became time to get married. I had made hundreds of pictures of my intended on our numerous jaunts, but when the fatal time came I felt it necessary to rid myself of the Graflex to help provide the wherewithal for married life. I most probably would have parted with my other cameras, had that type of equipment not then been a drug on the market, and had it not been impossible to get what I thought they were worth.

So photographic ambition went languishing until the baby came, when it became necessary to get pictures of the squalling—and otherwise—infant. Obviously, neither the view camera nor the vest-pocket or folding Ansco were the ones to be used, so the vest-pocket and the view went in on a brand-new 2¼ x 3¼ Revolving Back Graflex with F/4.5 and Verito F/6 lens. With the advent of the Graflex, photographic interest once more was aroused, and this time seems to be permanently aroused. My old enlarging camera was dug up and remodeled, and enlargements were and are the order of the day. The Graflex was a little cumbersome for some trips and for unexpected use, so a Leica camera was purchased. I have built myself a comfortable and convenient darkroom in one-half of the double garage, and spend hours and—when possible—days there. All of my prints are enlarged to 8 x 10—even the Leica negatives—and mounted as for exhibition. All my spare time is spent on photography, and most of my time in thinking of and planning for it.

I have just sent prints in to my first contest, so do not yet know whether or not I am on the way to pictorial success. But I have about fifty prints that seem to me to be worthy of a second glance, and a selection of some four hundred negatives from which to work, and I intend to go on trying until I do achieve what I am after. At any rate, I have the joy of spending my time on a most fascinating and, I think, worth-while hobby, with great chances of making something of it.





ASPEN TRAIL
FRANK A. LEE
HONORABLE MENTION—OUR MONTHLY COMPETITION

EDITORIAL

The Value of Salons

FOR over fifteen years we have been in a favorable position to know something of the practical and artistic value of photographic salons and exhibitions. Salon committees, judges, and contributors have had, and do have, their individual and collective problems. There have been, and are now, failures and successes. However, after careful consideration, and viewing the value of salons as related to the growth of photography in all its branches, we are convinced that well-advertised, attractively displayed, and well-conducted salons are a tremendous asset to photography as an art, science, and industry.

It was our privilege to see the Third Rochester International Salon of Photography held recently in Rochester, N.Y. We were deeply impressed by the splendid pictures shown and we thoroughly enjoyed our unusual opportunity; but perhaps an even greater pleasure and satisfaction was hearing the comments of the general public. In the past, it has been our privilege to visit many of the leading art museums and galleries in Europe. We remember the subdued voices and generally respectful manner with which visitors went through the halls and exhibition rooms. In those days it was hardly conceivable that photography would, or could, win the same dignified and respectful consideration as the older forms of art. Yet we have seen this very thing happen. As we moved about from one picture to another at the Rochester Salon and listened to the conversation of those about us, we heard many interesting things. In fact, had it been possible to record all the statements and comments made, we venture to say that the salon committee, the contributors, the manufacturers, and the photographic dealers would all have reason to feel complimented and at the same time have cause to wonder at the uncanny intuition of some of the general public. We believe that we were privileged to hear many things which were never intended for the ear of a photographic editor. All of which strengthened our conviction that salons are assuming an ever-increasing importance in promoting and encouraging public interest in photography as an art and as a science. We believe that pictorial photography today can, and does, stand squarely on its own artistic standards and achievements.

Although a salon is conducted for artistic reasons, and rightly so, we do not think we are lacking in artistic appreciation if we point out that salons have a very practical business value. Even though the majority of visitors to a salon may be unable to make pictorial photographs, their interest is stimulated, and in their own camera work they unconsciously strive for improvement. Furthermore, the manufacturers and dealers are directly benefited by the salons. It requires considerable photographic material to produce a thousand or more prints for submission to a salon. Even though only two or three hundred pictures are finally hung, the photographic material for the thousand or more entries is used, nevertheless. Prints which receive unusual notice are often excellent publicity for the manufacturer of the plate, film, camera, paper, or chemicals used. Then, too, the maker of the print very often finds that having his picture hung at a salon results to his financial advantage in the sale of duplicate prints. Altogether, there is a business value of a salon which merits the consideration of the photographic industry and those who contribute pictures to it. We are not suggesting for a moment that salons be commercialised; but we do believe that a wider recognition of their business value should be given to salons on the part of the photographic industry as a whole.

We grant that all salons are not perfect, that salon judges are human, and that contributors are not always pleased. Yet we believe there is good reason to feel encouraged. If for no other reason, we think salons should receive support because of their great educational value in stimulating increased interest in all branches of photography. What if there are some mistakes and blunders occasionally? Let us unite in carrying on for the sake of photography and its future as an art and a science!

XUM

OUR MONTHLY COMPETITION

Closing the 5th day of every month
Address all prints to PHOTO-ERA MAGAZINE, Monthly Competition
Wolfeboro, New Hampshire, U.S.A.

Awards

First Place	Certificate
Second Place	"
Third Place	"
Honorable Mention	"

(*a*) The person receiving the highest number of Certificates at the end of the year, December 15, 1932, will receive an engraved silver cup; the person receiving the highest number of Honorable Mention Certificates at the end of the year, December 15, 1932, will receive a smaller engraved silver cup.

(*b*) ***All who win awards receive Certificates.***

(*c*) Those who win an Honorable Mention Award and are ***not regular subscribers, or have not been regular subscribers,*** will receive PHOTO-ERA MAGAZINE for six months, with the compliments of the publishers.

(*d*) No competition-pictures are sold, exchanged, or the halftone-plates sold without permission, in writing, from the maker of the print. Proceeds of all sales, ***excepting halftones,*** go to the maker of the picture.

(*e*) All competition-pictures not returned are used to make up the PHOTO-ERA PICTURE EXHIBIT which is sent to schools, libraries, museums, camera clubs, and to responsible organisations for exhibition-purposes, ***free of cost.***

Rules

1. This competition is free and open to all.

2. Not more than one subject may be entered. ***Composition, exposure, and photo-finishing must be done by the competitor.***

3. Mounts must not be larger than 16 x 20 inches. Prints may be mounted or unmounted.

4. Each print must bear on the back the maker's name and address, and the title of the picture, and should be accompanied by a letter, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer, and printing-process. ***Entries which do not comply with this rule will be omitted.*** Enclose return postage. Data blanks sent at request.

5. Prints receiving awards become the property of PHOTO-ERA MAGAZINE, unless for special reasons. This does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

Photo-Era Competition Cup

6. Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces is sent with data.

7. Overseas competitors may send prints for several competitions at the same time. This will facilitate packing and reduce transportation charges.

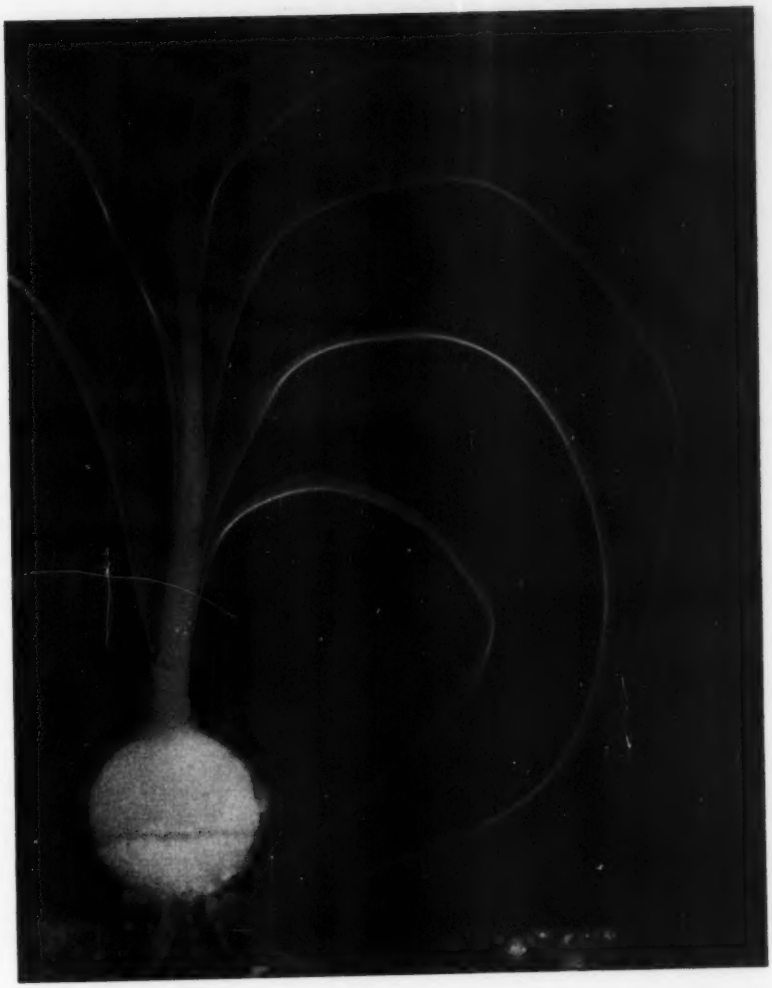
AWARDS—OUR MONTHLY COMPETITION

Subject—MISCELLANEOUS

Closed December 5, 1931

First Place	Dr. Irving B. Ellis
Second Place	Charles Linke
Third Place	George W. French

Honorable Mention: Roy and Brownie Adams; Edward Alenius; Axel Bahnsen; Roland F. Beers; Edith H. Bethune; Charles Clayton, Jr.; J. Daniels; R. W. Dawson; Carl Demaree; S. W. Friedman; Waldemar Glass; Edward L. Gockeler; E. Graham; Aileen L. Grapensteter; L. P. Gravel, Jr.; Dr. Kelley Hale; Zoltan Herczegh; Vincent H. Hunter; Sorab J. Kharegat; Dr. K. Koike; Fred G. Korth; Frank A. Lee; Ladis A. Lisy; Johannes Loewenstein; Kusutora Matsuki; John C. Moddejonge; John Muller; Dr. M. A. Obremski; E. J. G. Schermerhorn; N. P. Smith; Howard L. Snider; Dr. F. F. Sornberger; Dr. Max Thorek; A. M. Tomlinson; Elmer P. Trevors; R. Merrill Webster.



A FISH-EYE VIEW
DR. IRVING B. ELLIS
FIRST PLACE—OUR MONTHLY COMPETITION

ST. BERNARD PUPPIES — CHARLES LINKE

SECOND PLACE—OUR MONTHLY COMPETITION

Our Monthly Competition

ELSEWHERE in this issue we have given our impressions of Dr. Ellis's unusual picture, "A Fish-Eye View". As a design it is striking, and for that reason we reproduced it on the front cover. As a photograph it is perhaps even more interesting when the data are read. Some may point out that not every reader has the equipment with which to attempt studies similar to the one by Dr. Ellis. However, we have a large number of physicians and dentists on our subscription list who very likely do have the equipment to make photographic studies of an unusual kind. After all, why not give our medical friends free reign with their pictorial ideas? Let them obtain their effects with whatever method they prefer to use. We allow the makers of bromoils, gum prints, and carbon prints the privilege to use individual methods. The use of paper negatives, printing in clouds, making composite prints, and retouching of all kinds are now accepted as a legitimate part of the process of making an exhibition picture. In short, it is the finished product which is to be judged and not the details of its making. Therefore, if our medical friends see fit to use the X-ray in making pictorial prints, we do not see our way clear to make a very convincing objection. Although the advocates of "straight" photography have worked long and hard, the fact remains that, along with modernistic trends, pictorial photographers simply refuse to be limited either in method, equipment, or composition. The finished picture is the thing, so it seems, regardless of how, when, and where it was made. It was not our intention to discuss modern trends; so we shall return to Dr. Ellis and the interesting facts with regard to his picture.

Data: This is a photograph of a sea onion, pictorially arranged in water, X-rayed, and then photographed. *X-ray technique:* 40 K. V. P., 2-inch spark gap; 100-inch distance, 1-second exposure on Eastman ultra-speed safety duplitised X-ray film, 14 x 17 inches in size. *Photographic technique:* X-ray film placed against Cooper-Hewitt viewing box; Voigtländer 3¼ x 4¼ camera with Skopar 13.5 cm. lens; stop, F/22; 2-second exposure; Cooper-Hewitt light; Verichrome filmpack; A. B. C. Pyro developer; 8 x 10 enlargement on P. M. C. No. 11.

The Second Award, "St. Bernard Puppies", by Charles Linke, is a delightful dog picture which makes an instant appeal to every lover of animal life. It is no small matter to make such a picture. We know from personal experience. We venture to say that Mr. Linke probably made a number of exposures before he obtained the one he selected for our competition. Not the least attractive part of the picture is the facial expression of each puppy. The grouping is typical of young puppies, who naturally lean together for mutual support. The softness of the fur has been retained successfully, and the observer is sorely tempted to reach

CONTENTED GEORGE W. FRENCH
THIRD PLACE—OUR MONTHLY COMPETITION

into the picture for one or all three of the pups. We believe that many of our readers will find a new thrill in photography by making pictures of animals. Mr. Linke is to be congratulated and we wish that we might really see these puppies, so appealing has he made them to all who love dogs.

Data: Made in Libertyville, Ill.; August, 3 P.M.; slightly misty; 3¼ x 4¼ Graflex with Bausch & Lomb Protar 8¼-inch lens; stop, F/8; 1/50-second; Agfa Plenachrome Filmpack, Rodinal developer; paper negative on P. M. C. and print on Opal A.

There are few pictorial photographers who have been as successful as George W. French in portraying New England rural life. Being a native of Maine, he very naturally knows types and how to select them to advantage. In "Contented" he was most successful in obtaining the right man and then bringing out the thought he wished to express with his camera. Some may feel that the contented gentleman is a bit crowded in the picture area. His magazine is just squeezed in, his feet are eliminated, and there is not much space behind him. Then, too, the line formed by the open door at the left seems to have a tendency to lead the eye out of the picture. Without a doubt, Mr. French was handicapped by limited room and he had to do the best he could in the circumstances. However, the appeal of the picture is there and that is what counts, with all due respect to the critics. There is such a thing as a picture being so perfect and beyond criticism that it makes no appeal to the beholder. We have yet to see a picture made by Mr. French which failed to grip the attention and to hold it. May we all share the contentment of Mr. French's model during 1932!

Data: Made in Parsonsfield, Maine; August, strong light, 9.30 A.M.; 5 x 7 Seneca View Camera; 6½-inch Zeiss lens; stop F/7; one second; Standard Orthonon plate; pyro-metol developer; Artura Iris E Smooth from enlarged negative.

Hard Workers

Mrs. Brown: "Does your husband work, Mrs. Briggs?"

Mrs. Briggs: "Oh, yes. He sells toy balloons when there is a parade in town. What does your husband do?"

Mrs. Brown: "My husband sells smoked glasses when there is an eclipse of the sun." *Contact.*

THE COMPETITION SCOREBOARD

DECEMBER 5, 1931

	Points
Dr. Irving B. Ellis	65
George W. French	61
Edward L. Gockeler	58
Edith H. Bethune	53
R. W. Dawson	52
Sorab J. Kharegat	52
Dr. K. Koike	52
E. J. G. Schermerhorn	50
Dr. Max Thorek	50
Kusutora Matsuki	50
Roy and Brownie Adams	48
Harry B. Fisher	47
Waldemar Glass	46
Zoltan Herczegh	45
Dr. F. F. Sornberger	44
J. Daniels	44
Carl Demaree	44
Charles Linke	43
Fred G. Korth	40
John C. Moddejonge	40
Paul Bras	36
Lionel Heymann	36
Melvin Martinson	36
Dr. B. J. Ochsner	34
Edward Andres	32
Alma R. Lavenson	32
A. E. Moebs	32
N. P. Smith	32
A. M. Tomlinson	30
Edward Bafford	29
Alexander Leventon	29
Axel Bahnsen	28
Howard G. Dine	28
Dr. Kelley Hale	28
U. Stephen Johnson	28
William J. McCune	28
Anne H. Mellin	28
J. K. Hodges	26
William O. Yates	26
James A. Bell	24
Alexander Clair	24
Leland H. Croscup	24
E. Graham	24
Aileen L. Grapensteter	24
Xerxes Johnson	24
G. Hilliard Ross	24
Elmer P. Trevors	24
Allan F. Barney	22
H. F. Hiecke	21
Carmine Albanese	20
J. M. Banerjee	20
Robert B. Clark	20
M. Itoh	20
Edouard C. Kopp	20
Ladis A. Lisy	20
Charles L. Snyder	20
Harry B. Story	20
Arthur M. Underwood	20
Edward Alenius	16
Roland F. Beers	16
Frederick J. Hermann	16
Johannes Loewenstein	16
C. P. Martin	16
A. G. Niido	16
Corrado Sallustio	16
Thomas Scott	16
A. W. Clark	13
Dr. Glen H. Broyles	12
John L. Bruns	12
C. H. Clapper	12
Charles Clayton, Jr.	12
George M. Gerhard	12
L. P. Gravel, Jr.	12
M. Gurrie	12
Emil H. Kopp, Jr.	12
Walter Lipkau	12
M. G. Monami	12
Dr. M. A. Obremski	12
Carlton Shaw	12
James Simpson	12
Howard L. Snider	12
R. Merrill Webster	12
J. C. Wedekind	12
T. R. Wiley	12
Leonard Purin	11
Fred Beidleman	8
Matthews S. Beros	8
J. A. Couty	8
Gilbert Davies	8
James M. Dille	8
Beatrice M. Dine	8
Roy M. Ek	8
William J. Ennever	8
Edwin W. Gantt	8
A. F. Gatow, Jr.	8
Earl Gray	8
George M. Lehnen	8
Onn M. Liang	8
Wesley Lord	8
Erwin Marty	8
H. P. Morris	8
Henry Y. Okiyama	8
Margaret Parsons	8
Alfred Petrick	8
William M. Reyes	8
Leonard M. Snyder	8
L. H. Townsend	8
A. L. Tracy	8
Martin Vos	8
Hifumu Miyamoto	5
John Barry	4
J. E. Brash	4
Louis F. Brook	4
Dr. Frederic W. Burcky	4
Don Burkhart	4
Harold Carey	4
Edward C. Cohan	4
Fred A. Collatz	4
U. K. Das	4
Daniel DeVoe	4
William C. Duncan	4
Robert Ewoldt	4
W. B. Fairfax	4
J. H. Field	4
E. P. Fleming	4
S. W. Friedman	4
Samuel Grierson	4
Otto Groebe	4
W. H. Gruening	4
Arthur W. Grumbine	4
William F. Happich	4
Emily Hayden	4
Harold Hedger	4
Gertrude Hennig	4
Cyril F. Hopper	4
Vincent H. Hunter	4
Nelson Irving	4
Ray Lee Jackson	4
R. R. Jarrett	4
J. J. Katarmal	4
Theo Kay	4
Robert S. Knerr	4
Arthur J. Lang	4
Dr. Davies Lazear	4
Frank A. Lee	4
Joseph F. Leggett	4
Isidore Levitan	4
Arnold D. Lewis	4
N. G. Lindquist	4
Delle Mason	4
Henry J. Matthies	4
W. Allen May	4
Edward McMahon	4
F. Meyer	4
John Muller	4
William F. Murden	4
C. Nabuco	4
N. J. Nalawalla	4
Glendora Nichols	4
W. C. Niessen	4
N. Okada	4
Edward Ott	4
Donald C. Pigott	4
W. H. C. Pillsbury	4
J. B. Priddy	4
John S. Purdy	4
Hugo Raeth	4
Lucian B. Raynor	4
Gaston B. Remy	4
E. G. Royer	4
A. E. Rutenbeck	4
John O. Scudder	4
Virginia Semple	4
William H. Shupe	4
K. E. Skinner	4
Williard K. Smith	4
Albert B. Street	4
Dorothy Thompson	4
Heinz Timm	4
Yoneo Usami	4
E. H. Wallander, Jr.	4
Annie Watkins	4
Adeline Winter	4
Pauline W. Wolfe	4
George P. Wright	4
Gino Zenier	4

OUR ILLUSTRATIONS

A. H. BEARDSLEY

At first glance we doubt that many of our readers will decide correctly just what form of vegetation Dr. Ellis employed in making his unusual picture, "A Fish-Eye View". Probably the first thought is concerned with the rather unusual, yet graceful, lines produced by the long leaves, arranged in a sweeping, circular design. Although we give complete data in the department "Our Monthly Competition", yet we feel that it is only fair to our readers to tell them here that the subject is a sea-onion X-rayed in water, and then subsequently photographed from the X-ray film. Today pictorial photography does not seem to concern itself so much with the details as it does with the finished result. In short, we are not interested, so it would appear, as to how the result is obtained; but rather we concentrate on the effect which the completed picture has upon us. And so in the case of a "Fish-Eye View", we are impressed by the unusual design. That it happened to be a sea-onion X-rayed in water is, according to the modern trend, merely interesting, incidental information. Dr. Ellis has certainly evolved an unusual result, which is not only artistically of interest, but involves no little X-ray and photographic technique. Perhaps other readers who are physicians or dentists will be stimulated to renewed pictorial efforts along the lines suggested by Dr. Ellis's picture. We are glad that he left the beaten track and we await with anticipation his pictorial efforts in the future.

Incidentally, Dr. Ellis was the winner of the annual Photo-Era Competition Cup for 1931, which he received as having won the highest number of points for that year. Data will be found in the department "Our Monthly Competition."

It is rather fitting that Mr. Matsuki's picture, "After the Storm", should adorn our frontispiece as somewhat of an introduction to the leading article, which has much to do with the sea. For the benefit of those who are especially interested in composition, we point out that Mr. Matsuki has left plenty of room at the right of the boat, which is always to be advised in order to give a moving object space into which to move. It will also be noted that the horizon line is not in the center vertically of the picture, but below it. In this case it is what should have been done in order to include as much as possible of the cloud effect. The boat gives the required life to the composition. By covering it up it will be noted that the picture loses its appeal. Although the composition is simple, yet the result is most pleasing and pictorial.

Data: Made with an Ica 3¼ x 4¼ camera; in Seattle, Wash., Zeiss Tessar lens; focal length, 13½ cm.; stop, F/5.6; color screen 5x; September, 6 P.M., gray light; exposure, 1/25-second; Eastman cut film; Eastman Di-formula developer; Eastman Opal printing paper.

We believe that readers of Photo-Era are especially fortunate this month in having an opportunity to read the interesting story by Commander Ricketts and to study the illustrations which accompany his interesting photographic experiences on the International Ice Patrol. Commander Ricketts was more than generous in the number of prints which he sent for our selection. There were many of great interest which we were obliged to omit for lack of space. Those which we did include we hope will at least suggest pictorially what Commander Ricketts describes in the text.

Although most of the illustrations are intended for record purposes, there are several which are pictorial. "Towards Sunset" is an attractive effect which includes just enough of the ship to give the impression of sailing into the sunset across a shimmering sea. "Watching an Iceberg" is a rather unusual combination, in that the berg is virtually framed by part of the bridge, and the presence of the officer and the various instruments carries out convincingly the thought that the iceberg is being watched with care and efficiency. "Fog" is another more-than-record picture. The contrast between the dark uniforms and the fog-hidden superstructure of the ship is an interesting study. The position of the men seems to indicate that the fog is becoming rather trying and that its clearing away would be most welcome.

The group of pictures on page 61 suggests various incidents on the Ice Patrol. Outstanding among them in interest is the one which shows the crew lined up for the Titanic Memorial Service. The presence of the iceberg in the background adds a sinister touch which emphasizes the importance of the International Ice Patrol, and inspires the men of the Coast Guard to see to it that such a disaster shall never occur again in the North Atlantic. It is evident from studying the pictures of icebergs in both groups that often they must become singularly beautiful when the sunshine and shadows bring out their grotesque and often beautiful outline.

In the group on page 62, several of the pictures show members of the crew in the water, on a small iceberg, and some returning from a visit to an iceberg. Evidently after many days at sea it is a welcome relief in the routine for members of the crew to have a short "shore leave" on an iceberg, when conditions permit. It will be noted from the two pictures at the top of Group Two that the Ice Patrol is not always carried on in quiet waters.

In the view of the bow from the crow's nest there are indications that the ship is forcing her way through a heavy sea and a wind of gale proportions.

In the picture "Having Fun on an Iceberg", we see members of the crew on the berg itself, with the ship in the background and a small boat standing by to pick up the men on the berg.

The "Close-up of an Iceberg" gives us an idea of its height out of the water at certain times. When it is remembered that more than two-thirds of an iceberg is under water, one can readily understand that even the best of ships cannot withstand a collision with tons of ice. The *Titanic* disaster which occurred on April 14, 1912, made such an impression that steps were at once taken by all the nations which used the North Atlantic Ocean to guard against the menace of floating icebergs.

Commander Ricketts has given us data in his article, and his observations and suggestions will be found of service, even if the reader does not contemplate sailing the North Atlantic Ocean in quest of icebergs. We feel indebted to Commander Ricketts for giving us his photographic experiences and are confident that our readers enjoyed his account as much as we did. For additional data Commander Ricketts states that the pictures were made with a 3-A Kodak, with a Kodak anastigmat F/6.3, 170-millimeter lens, on Agfa rollfilm. No filters, range-finders, sunshades, or exposure meters were used. For taking pictures of bergs in bright sunlight, from 9 A.M. to 3 P.M., he generally used 1/25-second and F/16 or F/22.

An increasing number of landscape architects and others interested in horticulture are turning to photography to make not only a record of their work, but to use it in promoting interest in all branches of scientific landscape gardening and town planning.

We are glad to be able to give our readers an article by a landscape architect, who has found photography of service to him. As he points out, it is not only an advantage as a record of work done, but it is a convincing means to interest other prospects in having their grounds improved. He also adds that it is not always possible to make these pictures conform to the rules of pictorial composition for the reason that the clients insist that the pictures show certain specific things. However, in the two illustrations, we believe that Mr. Hussey demonstrates that he can make pictures which not only serve the purpose of records, but also have a pictorial appeal. We hope that this article will encourage other landscape architects to adopt photography as an effective aid in their professional work.

It seems to be a day of angles, curves, unusual lighting, and startling effects. Mr. Friedman, by means of a glass and four wooden hoops illuminated by a 500-watt Mazda lamp, has evolved an unusual effect which is modernistic. Some will fail to see any pictorial beauty in a picture of this type, and others will enjoy its novelty, lighting, and general design. It is noticeable that pictures of this type have won their way in many of the leading salons and exhibitions and it is too early to say whether or not it is a form of pictorial photography which will endure. It is a type of camera work which is now being utilised with effect by photographic illustrators in connection with advertisements. And it must be admitted that many of the photographic illustrations in magazines and newspapers of the day do possess marked originality and strong appeal. Doubtless Mr. Friedman will continue his experiments in this direction, and we are sure that he will find much to interest him in this type of pictorial composition.

Data: 9 x 12 Voigtländer Avus camera; Skopar F/4.5 (13.5 cm.) lens; stop, F/22; exposure, 8 seconds; diffused light; Eastman Kodak Portrait Panchromatic; Pyro D-1 tank developer; enlargement on Novabrom K-15; developer M.Q. (D 5 2).

There will be unusual interest in amateur astronomy during 1932 in view of the eclipse of the sun which will occur during the month of August. As it will be visible over a considerable portion of the eastern United States, it is of interest to learn how this phenomenon may be photographed, and in fact how other celestial bodies can be photographed. Thanks to Mr. Fassero, we have some interesting information with regard to amateur astronomical photography and two illustrations showing the result of his method. We hope that this article will be instrumental in helping readers to prepare to make the most of their opportunities next August. Incidentally, we expect to publish other material along this line during the coming months. Since the last eclipse of the sun, photography has made progress so that amateurs are assured of better eclipse pictures than before.

There is no question but that the photography of wild animals is one of the most interesting and fascinating of experiences. Those who know both hunting and animal photography admit that photographing wild animals is really the more exciting and thrilling of the two. Mr. Hunter made the most of his opportunity while in Yellowstone Park, and we have this interesting and effective animal study. It is not always possible to select just the time and place for such a picture. If there had been such an opportunity, it would have helped matters to have the scraggly tree in the background eliminated. As it is, the branches tend to confuse the beholder. Mr. Hunter states frankly in his data that he made no attempt to alter the original negative or print. It would be a simple matter to remove the branches back of the animal's head and thus avoid any feeling of confusion. Other than this, we feel that Mr. Hunter has made a very interesting and pleasing animal study, which is effective because of the strong contrast of light and shade.

Data: Made in Yellowstone Park with a 4 x 5 Graflex; Kodak anastigmat lens; focal length, 6⅜; stop, F/8; late June, 6 P.M., contrasting light, setting sun; 1/40-second exposure; Eastman D. C. Ortho plates; Elon-Pyro developer; Eastman Opal Bromide paper. Background of this picture is not dodged to make it dark. No reducing, retouching on negative.

The "Aspen Trail" is a very pleasing landscape composition which, due to its softness, suggests the warmth found in New Mexico, where the picture was made. By softening down the original negative, Mr. Lee has achieved an effect which might not be so pleasing were the original sharpness and detail retained. It is a question whether the composition might be improved by a little trimming to the right and a little to the bottom to eliminate some of the road. However, as the composition stands, it conveys a feeling of restfulness, which is most pleasing, and we compliment Mr. Lee on his success.

Data: Made in Taos, New Mexico; 4 x 5 Speed Graflex Camera; Zeiss lens; 6¼-inch focal length; stop F/6; color-screen, K-3; August, 2 P.M.; fair light; 1/5-second exposure; Wratten and Wainright Hypersensitive Panchromatic film; A. B. C. Pyro developer; Ergo Platinum printing-paper.

THE EDITOR'S CORNER

We Thank You One and All!

Soon after our January issue went to press, Christmas and New Year greetings began to come in from all parts of this country and overseas. There was a larger number than ever before of photographic cards and folders. Some were made with the purpose of making the recipient enjoy a good laugh in true holiday spirit, and others, because of their pictorial beauty, conveyed the Christmas message with artistic understanding and interpretation. Then, too, there were many beautiful printed cards with appropriate verses. It was probably a reflection of the times that we received many personal letters instead of the usual greeting cards. We feel deeply indebted to those who took the time to write so that we might be sure to know that we were not forgotten, even though the conventional greeting card was not sent. Whether the Christmas or New Year greeting came by photographic folder, greeting card, or personal letter, we wish here to thank you one and all for helping to make the Editor feel that he has been of some service and that he has many friends who are depending upon him to carry on to the best of his ability. What is ahead of us all for 1932, no man knows. Within the limitations placed upon us by times and conditions over which we have no control, it is the duty of every person to do his or her best, day by day, and then the future will take care of itself. The Editor will try to practise what he preaches to the end that those who love the art and science of photography may enjoy it to the full during 1932, and for many years to come.

Encouraging Evidence

It was but natural that we should approach the subscription season with considerable misgiving. We realised that many would be unable to renew their subscriptions through lack of money, no matter how much they might like the magazine. When it becomes a matter of using limited funds for necessities or for a subscription, there is not likely to be much hesitation with regard to how the money will be spent. However, in spite of general conditions, we have had an excellent percentage of renewals and many new subscriptions have continued to come in. We hope that this is an indication of the turn of the tide to better times ahead for us all.

A Happy Reunion

Our readers will recall our mention of the delightful visit which Dr. E. P. Wightman, F.R.P.S., paid us in Wolfeboro while he was serving as one of the judges of the First New Hampshire Salon of Photography held in Concord, N.H., early in 1931. They will also recall mention of the visits of Alexander Leventon, A.R.P.S., and his charming wife during several summer vacations. These good friends all came to see us from Rochester, N.Y., where Dr. Wightman is on the staff of the Eastman Kodak Research Laboratory and Mr. Leventon is concert master of the Rochester Civic Orchestra. We have received repeated invitations to come to Rochester from these friends, but always there was something to prevent our accepting. However, about one week before Christmas the way seemed to clear for Mr. and Mrs. Editor to accept the hearty invitation extended by Dr. and Mrs. Wightman to spend Christmas in Rochester. Apparently the fates decreed in our favor with regard to weather and all the last-moment things which had to be done. On the morning of December 23 we started out to drive to Rochester, and arrived without mishap on Christmas Eve.

From the moment of our arrival our hosts, aided and abetted by the Leventons, did everything possible to make us feel at home in Rochester. We visited Kodak Park, we heard the Rochester Civic Orchestra, we saw the Third Rochester International Salon of Photography, we enjoyed the theater, toured around Rochester, and, best of all, met many charming people all more or less keenly interested in photography. An outstanding event was the honor which Mr. and Mrs. Editor received of being photographed by Alexander Leventon in his own studio. In fact, we had such a wonderful time that we needed the two-day return journey to get calmed down to normal again. Although the hospitality of Dr. and Mrs. Wightman and the splendid co-operation of Mr. and Mrs. Leventon overshadow all else as we recall our eventful holiday trip, yet we must add just a word with regard to the many magnificent pictorial subjects which we found along the way. From Wolfeboro through the New Hampshire hills on into Massachusetts, and over the famous Mohawk Trail to the Berkshire Hills and then to Albany, offered countless subjects. Then from Albany we went on to Syracuse, through the well-known Cherry Valley, and finally arrived in Rochester. With very few exceptions the highways were as free of snow and ice as though it were in July. However, two days after our return to Wolfeboro a heavy snowstorm swept across the territory we had traversed and winter arrived with convincing suddenness.

Indeed, our Christmas trip to Rochester was a happy reunion. There were many things to talk over and pleasant experiences to recall when we were all together in Wolfeboro. To photography belongs the credit of many such friendships. Mutual interest in the camera prompts correspondence; this leads to a meeting which finally ripens into sincere regard and friendship. After all, is there anything finer than the art and science of photography to draw persons together in a common appreciation of the beautiful in nature and in man? We believe not.

XUM

LONDON LETTER

CARINE AND WILL CADBY

CHRISTMAS has timed its advent a little tactlessly this year. We are just getting into our economy stride and are pulled up short with the problem of Christmas presents. It is simple enough among contemporaries, as most responsible people are feeling too worried with present conditions and are too apprehensive of the shadow that we fear they throw on the future to indulge in much festive gift-giving spirit; but children must not have their faith in Santa Claus and all that he means shaken, for they have no budget, private or public, to balance.

There are an increasing number of things that will please the young. Even among photographic gifts, to which we, as propagandists of Camera Art, always confine ourselves, many presents may be found. This year we notice that those of our young friends who possess Ciné cameras are glad of fresh reels, and luckily these have been very much reduced in price this month. The Christmas holidays are the time, more than any other, for film displays, and although no doubt individual work should form the greater part of the program, it is a decided help to be able to project what one might call a professional film as well. Should matters be helped out in this way, we advise that the audience be informed of the fact for the following reasons.

Not long ago we were invited to a film display given by three young people who owned a kinematograph camera among them. They had hired a good seaside reel from one of the film libraries to make the entertainment last out, and had sandwiched it in among their own somewhat amateurish efforts. We, knowing the extent of their proficiency as photographers, immediately recognised its expert quality and guessed its origin. But the greater number of the audience took for granted that it was the young people's work and singled it out for loud and enthusiastic praise. No mention was made of several charming little ideas which were quite well carried out; it was the seaside reel, and that only, that received its due. One old lady, in fact, went so far as to recognise one of the acrobatic bathers, and congratulated the supposed original on her diving. Of course, there were explanations; but the audience would have none of them, and the old lady went away, murmuring: "She must be a champion diver, I am so glad I have seen her."

We often congratulate ourselves that we get more out of PHOTO-ERA than many of its local readers, for to us it is bound to be more of a change. Things that strike and interest us, Americans probably take as a matter of course. For instance, in the December number there is an article on "Making a Holiday Self-Supporting", which shows us Cincinnati instead of Brighton or Bournemouth. The names of these American towns have a charm and mystery to us who have never seen them, for the imagination is given a free field; and probably it is better to keep the dream picture. "Bert and Ray", too, are characters that do not exist over here. "The Work of a University Photographer" gave us quite the sensation and interest of a change of scene and environment; and the editorial does not come from our comparatively confined lake district, but from one of wider, freer spaces, which seems—judging by what we read, and we never miss our Editor's letter—to make for clear thinking and an encouraging, optimistic outlook. This, we take it, is what we all need on both sides of the Atlantic, with circumstances ever narrowing and becoming more depressing. His sentiments are a veritable pick-me-up, for surely a day must come when we cease bumping across the bottom of the world depression and begin the ascent into better times.

The Times has broken fresh ground, at least for this country, in its publication lately in the weekly edition of a color supplement. That is to say, there are eight pages in full color and eight pages in monochrome photogravure. These are additional to the eight pages of halftone pictures which have been a regular feature for some years. The new thing about it is that the pages of news pictures in color and monochrome photogravure are incorporated mechanically in the paper. It has always been a problem in newspaper production to find a means of incorporating the photogravure pages with the newspaper other than by subsequent handwork. A new mechanical device has now been introduced which, attached to the printing press, controls the insetting of the photogravure pages in their proper position side by side with the ordinary press-produced matter.

Most of the photographs shown in color are instantaneous, and were made with single-exposure cameras, operating much in the same way as an ordinary press camera. The difference seems to be that the shutter makes an exposure on three plates instead of one, the light passing through a blue, a green, and a red filter. After development, all three are printed—photographically—on a pigmented paper, each in its complementary color. The result is three prints, in yellow, red, and blue, respectively, which are transferred one above the other on white paper which acts as a support, the result being a photographic print in natural colors.

Such, briefly, is the description given by *The Times;* but when one passes from the technical wonder of the production of color prints in a newspaper to studying the results, one cannot help a certain amount of disappointment. Color photography has a long way to go yet to be esthetically satisfying, and one turns from these mechanically colored pictures to the monochrome photogravures with relief.

One of the post-war tragedies has been the plight of the Russian aristocrats, many of whom have been working in London. One of our neighbors was concerned about a young man whose

(*Continued on next page*)

HERE, THERE AND EVERYWHERE

To ensure publication, announcements and reports should be sent in not later than the 5th of the preceding month.

New Rolleiflex Folder

An attractive, well-illustrated descriptive folder on the Rolleiflex camera has just been issued and may be obtained by addressing Burleigh Brooks, 127 West 42d Street, New York City. By means of pictures and text the features of the Rolleiflex are explained in detail, so that the reader may have a clear idea of this remarkable little camera. We suggest that our readers obtain this folder before the supply of copies is exhausted.

With the many excellent cameras now on the market, any equipment which wins a place for itself in the face of keen competition must have merit. The high-grade miniature camera of today, in order to win public confidence, must equal, if not excel, the larger outfits in every detail of construction and workmanship.

International Salon in Chicago 1933

The Salon Committee wishes to make it clear that this great salon will be open to the photographers of the world, whether professional or amateur. It will be conducted in the manner of all first-class salons and will be judged by an International Jury of Selection. Particulars may be obtained by addressing George H. High, Chairman, Chicago Camera Club, 137 Wabash Ave., Chicago, Ill.

London Letter

(*Continued from preceding page*)

governess she had been in the old days in Russia. He, Nicholas E. Smirnoff, had come to England penniless, and she, knowing his bringing up, was hopeless as to his making a living. But as a boy he had been keen on photography, and here in London he started to work in one room on portraiture, often having to spend on films the money that should have gone to buying food. He is now doing well, and we visited an exhibition he gave lately of a charming show of two hundred portraits of children. Mr. Smirnoff's strong point is that he induces the sitters to be oblivious of the camera, and the results, mostly light in tone, are satisfying and natural and yet not in the least snapshotty.

A Personal Telescope

A new folder has just been issued by the Bausch & Lomb Optical Company, Rochester, N.Y., in connection with the new B. & L. Utility Observation Telescope which is now being placed on the market. In view of the coming eclipse of the sun in August, 1932, and the general increased interest in amateur astronomy, this new personal telescope should meet an immediate need. It may be used on a table or floor tripod, and eyepieces of various magnifications are available. Its moderate price recommends it to individuals and organisations which heretofore were financially unable to have a telescope of equivalent value and efficiency. A copy of the descriptive folder will be sent to any reader who will write to the manufacturers.

Filter Factors for Agfa Plenachrome Film

Through the courtesy and co-operation of the Agfa Ansco Corporation, we are able to give our readers helpful data with regard to the use of filters with Agfa Plenachrome film. Here are the factors:

Agfa Filter	*Multiplying Factor for Plenachrome*
No. 0	1½
No. 1	2
No. 2	3½
No. 3	5
No. 4	6
No. 5	8
Wratten Filter	
K-1	2
K-2	8
K-3	12

The Agfa Ansco Corporation recommends the Agfa Safelight No. 107 for developing Plenachrome, and other extra-fast orthochromatic material, for the reason that the Agfa Safelight gives greater working illumination than other safelights recommended for films of this type although with the same degree of safety.

Photoflash Lamp and Graflex

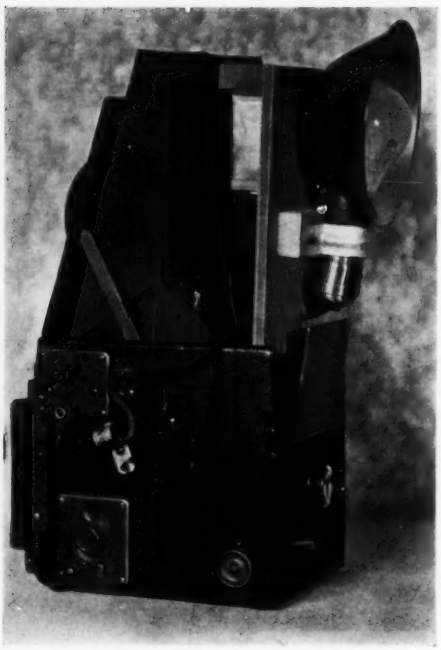
To the Editor of Photo-Era Magazine:

As one editor to another, I believe you will be interested in an adaptation I have made of the Graflex Photoflash attachment described in the September, 1931, number of Photo-Era Magazine.

In starting to make the device described by Frank O'Beirne, I discovered that my revolving back Graflex could not readily be used. The revolving back left little space at the rear for placing a plunger to be contacted by the little metal lever which works toward the back.

I, therefore, decided to use the lever which controls the reflecting mirror. From an electrician I obtained a round piece of fiber perforated to contain a plunger mounted with a spring, with a terminal at the end of the plunger. I mounted a binding post on the side of the camera, as shown in the accompanying picture, and grounded one side of it to the metal at the top of the Graflex.

XUM



GRAFLEX PHOTOFLASH ATTACHMENT

OLIN E. HINKLE

Next, I mounted the plunger just back of the mirror lever, timing the contract so that it occurred at the instant the mirror cleared the lens, while the curtain was open at 0 and just prior to the dropping of the curtain under tension 3.

To mount the reflector, I obtained a piece of wood veneer just wide enough to slip inside the camera at the top front, and tall enough to approximate the height of the hood. A block of white pine was nailed to the top of the veneer to make the board parallel with the lens. A snap fastener used by upholsterers served nicely to fasten the board to the hood and to prevent loss of the demountable board in case the press photographer was compelled to beat a hasty retreat from his subject.

The reflector used was one with the bulb placed flat against the surface, and the socket was of regulation type. The battery, a 4½-volt radio C, was fastened behind the mounting board with a strip of tin and a screw, the connections being downward. The wiring was in series, using double-silk flexible cord.

In actual practice, the camera was focused on an object 12 feet away, with the diaphragm at F/8. After inserting a flash bulb and film, the camera was ready to be placed at 12 feet, or thereabout, and the shutter operated in the usual manner. Experiment showed that by reducing the aperture to F/11, the apparatus could be used very handily in that awkward period between usable actinic light and darkness.

In utter darkness, the Graflex shutter may also be set on T, and the focal-plane curtain not used, after the fashion of amateurs who have ordinary Brownies. Since the flashlight assemblage may be almost instantly removed, and since this devise makes tripods unnecessary, it is one that we recommend for press and advanced amateur night photography. I believe that my adaptation has the advantage of being more rigid than the one Mr. O'Beirne described. The materials used are almost identical. I hope this method will prove useful to owners of Revolving Back Graflexes.

OLIN E. HINKLE.

Photographic Society of Philadelphia

AT the recent annual meeting of the Photographic Society of Philadelphia, 1615 Sansom Street, Philadelphia, Pa., the following officers were elected for the ensuing year: Herman W. Fernberger, president; A. A. Leonard, first vice-president; Robert T. Henry, second vice-president; J. Jacob Baylson, treasurer; and E. A. McKinley, secretary.

"My Branch of Photography"

MUCH to our regret a rather peculiar error occurred in the January, 1932, advertising of our good friends, the New York Institute of Photography, 10 West 33d Street, New York City. The heading to this advertisement read, "Find out about your opportunity in *my* branch of photography, projection or photo-finishing." Naturally, the reader wanted to know what was meant by "my branch of photography, etc." In fact, when our attention was called to the matter, we were just as eager to find out as our readers. Tracing the matter back we discovered that in the original copy, which was written, not typed, the word "my" was really the word "any"; but the writing was just a bit obscure, so that either word might seem correct to a hurried compositor. Therefore, to clear up the matter, the heading should read as follows: "Find out about your opportunity in *any* branch of photography, projection or photo-finishing." The photographic courses of instruction offered by the New York Institute are too varied and extensive to be limited by "my branch of photography", as their instruction includes *all* recognised branches of photography. We hope that this word of explanation will answer the questions of interested readers and also convey our regret for the error to the New York Institute of Photography.

Making Photographs for Publication

THERE are over two thousand periodicals published in this country and more than that many newspapers. A very large percentage of these publications are illustrated by photographs, yet many photographers seem to deliberately ignore this decidedly favorable market.

The opportunities offered certainly are interesting, but too often the would-be contributor is discouraged when he finds his photographs are being rejected. Knowing the great opportunity which exists, and knowing the large number of photographers who would gladly avail themselves of the opportunity, the Universal Photographers Corporation of 10 West 33d Street, New York City,

have prepared a set of instructions giving in minute detail the requirements of the various publications and also publishing, for the first time, a great number of so-called tricks of the trade.

The purpose of the Universal Photographers Corporation is to establish a better understanding and closer contact between the photographer and the publisher. They have prepared an attractive booklet entitled "Photographic Journalism", which will be sent without obligation to anyone addressing an inquiry to Universal Photographers, Inc., 10 West 33d Street, New York City.

Indianapolis Camera Club

THE newly elected officers of the Indianapolis Camera Club, 109 North Riley Avenue, Indianapolis, Ind., to serve for the year 1932 are the following: Walter W. Bonns, president; S. Neil Campbell, vice-president; Warner B. Trembley, secretary; Richard A. Kurtz, treasurer; executive committee, Hillary G. Bailey, James C. Cox, and Brandt Steele.

"Life on the Quadrangles"

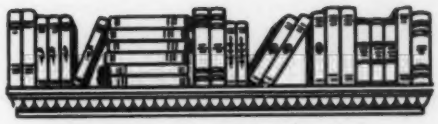
THE Vitaglo Corporation of Chicago has just completed production of a three-reel talking picture, "Life on the Quadrangles", for the University of Chicago. The University has been seeking for some years the most effective means of satisfying requests of its alumni and of high schools for information concerning its activities, and has adopted the sound-picture medium as providing the most vivid and satisfactory method.

Touching on all phases of college activities, the picture presents realistically the student life of the University of Chicago. It takes the audience into the lecture room, the conference room, and the laboratory. It enables them to hear President Robert Maynard Hutchins explain the new educational plan. Among other notables seen and heard are Thornton Wilder, the novelist, advising a student writer, and Director A. A. Stagg, the famous "Old Man" of Chicago athletics, talking to his football team before it takes the field in an important game.

There is a representative selection of campus activities, among them scenes showing women's athletics, archery, hockey, and swimming, the staff of the student newspaper at work, dramatic rehearsals, and informal views of dormitory and fraternity life. A scene of unusual beauty in the University Chapel emphasizes the spiritual life of the University.

While the picture maintains a tone of dignity throughout, it moves swiftly and holds interest to the final fade-out. The voice of Quinn Ryan, of radio fame, makes running comment on outstanding features of the picture. The "Alma Mater", sung by the University choir, furnishes an attractive accompaniment to the title footage. Staging of scenes was avoided in producing the picture and the action is consistently natural.

"Life on the Quadrangles" was produced at the University and the Vitaglo Studios, under the direction of Avery B. Chereton. The photography and sound are theatrical in character and of a quality not ordinarily found in straight commercial productions. An enormous amount of incandescent lighting was used on a number of the University scenes.



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

THE AMERICAN ANNUAL OF PHOTOGRAPHY, 1932. Edited by Frank R. Fraprie, F.R.P.S. 294 Pages of text and over 100 half-tone illustrations. Price, paper, $1.50; cloth, $2.25. Boston: American Photographic Publishing Company.

There is much of practical and artistic value in the 1932 edition of "The American Annual of Photography". There are over one hundred illustrations, most of them excellent examples of pictorial photography obtained from leading salons and exhibitions. A number of the articles are illustrated with striking photographs. As a matter of fact, the amateur and the professional photographer alike will find the pages of the 1932 annual of more than ordinary helpfulness. As the edition is usually sold out within a few weeks of publication, we suggest that our readers place their orders for the 1932 "American Annual" without delay.

DAS DEUTSCHE LICHTBILD. The German Annual of Photography, 1932, published by Robert and Bruno Schultz. 68 Pages of text and 192 full-page illustrations. Price, cloth, $4.00. Boston: American Photographic Publishing Company.

Each year we use superlatives with regard to "Das Deutsche Lichtbild", and now it is becoming increasingly difficult to avoid repeating ourselves. With all due respect to photographic annuals of other countries, including our own, we say without hesitation that this German annual is again superior to anything of the kind that we have seen. The reproductions are superb, there is splendid variety, and virtually every picture is outstanding. There is no field of photography which is overlooked. The reader will find nearly every conceivable type of subject, from the conservative to the extreme in modernistic treatment. And then, after he has gone through the pages once, he will return again and again to study certain pictures which grip—yes, even thrill—the beholder. Those of us who may feel that we can make a fair picture, under favorable conditions, are suddenly faced with a technique and an artistic interpretation which humbles us with its compelling superiority. We cannot help feeling proud of photography when we see what it can do in the hands of those who are masters of their cameras. This annual is a splendid inspiration to every amateur and professional photographer. The 1932 edition is larger than the 1931 volume; but even so, we wish there were more pictures. There will never be enough of the kind reproduced in this annual. It is needless for us to suggest that no time be lost in obtaining a copy before the limited supply is exhausted.

XUM

WHAT'S NEW?

A department reserved exclusively for the announcement and description of new photographic goods and services.

New Luc Shutters

BURLEIGH BROOKS, 127 West 42d Street, New York City, announces that he has obtained the sole agency for America on the Luc-before-the-Lens and Luc-behind-the-Lens Shutters. Because it is so easily attached, the before-the-lens type is more popular. It fits on the front lens element like a cap, with three screws to take up variation in size.

The Luc Shutters have been on the market long enough to be thoroughly tried out and they have proved extremely satisfactory. They are small and neat in appearance, and a marvel of mechanical simplicity. The number of working parts is extremely small, tending to eliminate almost entirely any repairs. These shutters have a star-shaped opening, which lets in the maximum of light, and they make snapshots up to 1/30-second, as well as bulb and time exposures. Operated with a cable release of any length, they are practically noiseless.

Another article that has found a ready market is the Brooks adjustable printing mask. These masks fit standard printing frames and boxes, and permit of masking down the negative to any desired size almost instantly. They are simply made, of thin, non-rusting metal, with the sides attached at right angles and sliding easily and accurately to the desired size. They are made in four sizes, from 4 x 5 to 11 x 14 inches.

Still another Brooks offering is the Brooks Pocket Tripod. This is a marvel of modern construction and is the smallest and lightest on the market. Closed, it is only 7½ inches long. It is flat in form and easily fits the pocket. Open, its ten sections extend to 44 inches. It comes in brass and in duraluminum, the weight of the latter being only ten ounces. A neat leather case is included.

Filmo Model JL Projector Announced

BELL & HOWELL COMPANY announces the Filmo Model JL Projector—a slight modification of the recently developed Model J—which permits the use of the new 400-watt biplane filament lamp just perfected by lamp engineers after years of experimentation. In this connection the Bell & Howell Technical department states:

"Increased brilliance, plus uniform direct illumination on every fraction of the screen area, are brought to 16-millimeter projection by the new lamp. This important lamp development means that improved projection quality is now available to all 16-millimeter films. Especially in Kodacolor projection, the superiority is marked, for the new lamp eliminates color wedging, lost color values, and color distortion.

"The new 400-watt, 100-volt lamp has eight filaments set in two staggered rows, so that intervals which formerly were filled in by reflected light are now flooded with direct light, eliminating shadows. The reflector behind fills in any minute interstices and further evens out and strengthens the entire illumination.

"The use of the Biplane Filament Lamp is made practical by the combination of the highly efficient fan and aëro-type cooling used exclusively in the Filmo Model J Type Projector, and the new lamp will hereafter be supplied as regular equipment in the slightly modified Model J known as Filmo Model JL Projector.

"The change in the Model J will consist of a new voltmeter calibrated up to 100 volts, and in certain changes in resistance wiring. It is possible to use the new lamp with the 375-watt Model J voltage meter, but it will not be entirely satisfactory, for the reason that low-line current conditions might not permit of sufficient travel of the rheostat lever on the lamp house. However, the necessary adjustment of any previous 375-watt Model J for using the new lamp can be made for a very reasonable charge at any Bell & Howell office.

"The 375-watt lamp may also be used in the Model JL, or in previous Filmo Model J's which have been adjusted for the new lamp, as there will be a marking for this lamp on the new voltmeter. The use of the 250-watt lamp will be eliminated, as the resistance will not take care of lamps with a wattage of less than 375."

Agfa Ansco Announces Colorol Film

NATURAL-COLOR photography by amateur photographers with a regular rollfilm camera, on a basis which provides as many duplicate prints on paper as may be desired, is announced by Horace W. Davis, President of Agfa Ansco Corporation.

The new method, which is the result of extended research and practical picture-making tests for some time past, is referred to as the Agfa Colorol System, and the film with which the pictures are made will be known as Colorol Film.

In his announcement, Mr. Davis said: "Actual color photographs on paper, on a basis which would permit duplication and open the possibilities of color photography to amateur photographers everywhere, have been the dream of the photographic world for many years, and this dream is realised in the announcement of Colorol film. The Colorol film is loaded into a hand camera like any regular rollfilm, the only special requirement being a pressure-plate arrangement with which the camera may be fitted by Agfa Ansco. The pictures are made in the regular way, and the film rolls are then sent to Agfa Ansco Corporation in Binghamton, where they are processed by the Colorol laboratory, the customer receiving his finished picture or pictures in the form of actual color photographs in enlarged size."

The film will be furnished, at first, only in the size for No. 1-A or 2½ x 4¼ folding cameras, which take the regular D-6 Agfa all-weather film, and all prints will be delivered in the standard 5 x 8 size. The film is already in stock to fill orders.

The Colorol process is stated to bear no resemblance to the Agfa Color Plate process, the latter being on a transparency basis, whereas the Colorol process gives the final result as a print on paper. The Colorol process is further stated to be fully covered by patents exclusively controlled by Agfa Ansco.

Details of the process show it to be a highly technical achievement. The Colorol film is actually not one film, but three superimposed in what is known as a tri-pack arrangement. Each of the three films in the pack is selectively sensitive to one of the primary colors only, while transmitting the others. By means of an ingenious and highly accurate combination of color sensitivity and color filtration in the three films, each film in this way records one of the primary colors only, in black and white, and, when the three films in the tri-pack have been developed, enlarged positives are printed from them by projection, these positives then being printed in the corresponding complementary colors by an imbibition process—the result being a colored photograph on paper in the natural colors of the subject.

The Colorol system marks a further advance over previous attempts in color photography in that it is relatively fast, the Colorol film requiring only three times what would be the normal exposure for an ordinary black-and-white film. No filters are required on the front of the camera, and under exceptionally good light-conditions with a fast lens, exposures can even be made on a snapshot basis without the use of a tripod. Colorol films can also be exposed by Photoflash.

"The attempt to use color to supplement the graphic arts dates back to the beginning of man", states the company announcement. "The oldest carvings in the rocks of the deserted caves of prehistoric man still bear evidence to the fact that at the time they were made some colored pigments entered into the composition of their crude attempts at the graphic arts. The walls of the Ancient Egyptian temples show color in the historical carvings, and as man became more proficient in the application and blending of colors, we see an increase in the perfection of the art of painting; but it is still limited by the skill and ability of the individual artist.

"With the early photographs produced in the old tintype days, the practice of hand-tinting came into use; but, from the standpoint of photographically colored prints, it has always been necessary to develop a certain amount of individual skill in the application of the color to get even a reasonably satisfactory colored print.

"A means of color registration produced photographically has been diligently sought by all of the outstanding experimenters in the art over a period of the last one hundred years, and a remarkable degree of success has been attained in the production of transparencies to be viewed by transmitted light or by projection. The Agfa Color Plate represents the most highly developed example of this type of color photography.

"Agfa Color Plates now occupy a place of permanent utility in scientific, commercial, and personal photographic work, and their use has been increasing steadily. The new Colorol process does not in any sense replace Agfa Color Plates, but provides a new method of natural-color photography of wider application and universal appeal.

"Hitherto, the making of color photographs on paper has been an extremely difficult individual art, not sufficiently simplified to place in the hands of the layman. The prints have been produced only on a limited laboratory scale by the use of very intricate scientific instruments. But now new developments in the field have made it possible to do this on a production basis at a reasonable cost. In other words, the Colorol system makes conveniently available to the general picture-making public something which was possible before only for the expert laboratory worker—actual photographic prints on paper in the original or natural colors of the subject."

Victor Offers Complete Series of New Model 7 Projectors

Victor Animatograph Corporation, Davenport, Iowa, announces that the New Model 7, Victor Ciné Projector, is now available in a complete series which embraces the following equipment:

Model 7 Regular, which is equipped with 300-watt "No Resistance" Lamp (100–120 volt).

Model 7G, with 50–60-cycle alternating current transformer built into base to permit use of high-intensity 250-watt, 20-volt lamp. Current may be diverted from the transformer to permit use of 200- and 300-watt lamps of 100–120 volts on either direct or alternating current.

Model 7R, with No. 11 Victor variable resistance lamp rheostat mounted with swivel post on projector base. This model accommodates (on either alternating or direct current) the 250-watt, 50-volt, 375-watt, 75-volt, and 165-watt, 30-volt, high-intensity lamps, as well as the regular 100–120 volt, 200-watt and 300-watt lamps. It is said to have the widest range of lamp interchangeability of any 16-millimeter projector on the market.

Outstanding among the new features offered in the Model 7 Series of Victor Ciné-Projectors is an improved optical system which affords much better illumination, regardless of the type of lamp used. The Model 7 Regular, which employs the new 300-watt lamp, is said to set a new standard of illumination for 16-millimeter projectors that are not equipped with some form of lamp resistance. A wider speed range and more quiet operation are other improvements.

The Model 7 Regular and the Model 7G are equipped with the attractive rectangular base which previously was supplied only on the Model 3G. The Model 7R has the pedestal base to permit swinging the rheostat in under the projector body when placing the machine in its carrying case.

Well-known exclusive Victor features, such as the adjustable shutter which is a constant safeguard against "jumpy" pictures, the automatic film trip which affords protection against film damage, and other equally important refinements, are all embodied in the Model 7 Series.

The price range of the series is from $175 to $205 for an equipment complete with carrying case, accessories, and tools.

THE AMATEUR KINEMATOGRAPHER

HERBERT C. McKAY, F.R.P.S.

Sound

(*Continued from January, 1932, issue*)

The final instrument in the chain is the loud speaker with which we are all familiar. The loud speaker takes up the interrupted sound wave which was stopped at the microphone and reproduces it again so that it is audible to any human ear within range. As a matter of curiosity, attention may be called to the fact that by the interposition of the electric chain it is possible to transmit sounds through almost inconceivable distances at the speed of light so that the various artificial steps actually increase the speed with which the impulses are transmitted.

With this brief explanation let us trace the path of sound through the entire chain. Let us assume that we have a metal reed vibrating at the rate of five hundred cycles per second. Five hundred impulses of air beat upon the diaphragm of the microphone which sets up five hundred changes of current each second. These changes are amplified in the amplifier chain and cause the recording mirror to rock five hundred times per second.

Making a microscopic examination of a sound-track which exhibits certain definite faults

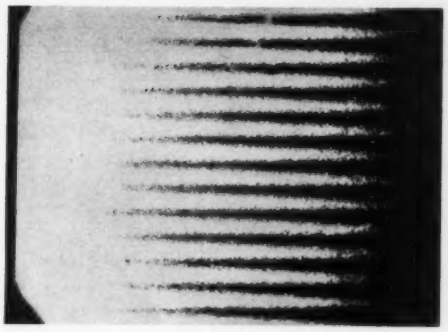
FIGURE 1 HERBERT C. McKAY

A large scale photomicrograph of a part of a sound-track showing the complex "sawtooth" effect of the sound-track pattern. The individual grains of silver which make up the track-pattern may be seen distinctly

FIGURE 2 HERBERT C. McKAY

As the film is moving at the rate of eighteen inches per second, five hundred fine lines will be impressed upon it only .036 inch apart. When the film is developed and fixed, these lines appear as actual black lines of the size and frequency indicated. When this film is placed in the projector and the image of the bright slit of light falls upon it, the light passes through the clear portion of the film and into the photo-electric cell. When the film is set in motion, these five hundred black lines passing across the tiny beam of light interrupt it five hundred times in a second. This causes a current fluctuation to be set up in the photo-electric cell at the same frequency. This is amplified and fed into a loud speaker with a result that the diaphragm of the loud speaker vibrates five hundred times per second, and the original sound wave of the same frequency is recreated for perception by the human ear. This is quite simple in theory.

It is true that another system which is highly favored makes use of lines of various density



A photomicrograph of the sound-track of a sustained note of 5000 cycles per second—a type of film used for experimental and testing purposes in the laboratory

FIGURE 3 HERBERT C. McKAY

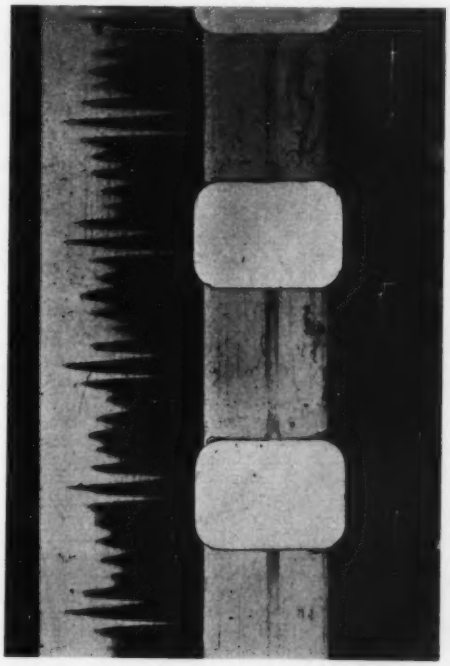
instead of various length for the reproduction of amplitude, although the frequency is maintained in an approximately identical manner. This change in method does not alter the actual electro-acoustic process involved, nor is this altered in any great degree when the disc phonograph record is substituted for the sound on film.

Talking motion-pictures have made necessary the design of microphones of entirely new standards of accuracy and perfection. The original carbon microphone, regardless of how carefully it may be handled, has an inherent, though slight, continuous fluctuation which gives rise to a slight sibilant sound known as carbon hiss. To avoid this, microphones were made without the carbon, the fluctuation being produced by the condenser action of two thin plates of metal vibrating very close to each other. Even in the best of microphones certain distortion of sound is almost inevitable, although at the present time this distortion is so slight that it may only be perceived by expert engineers.

Of course, it is almost impossible to find a place which is really free of noise. The very slight and confused sound which is an accompaniment to our everyday life combines with the carbon hiss to form ground noise, a term which is familiar to radio enthusiasts.

Radio fans know that some amplifiers are very objectionable in that they favor certain frequencies and even actually cut off others. Thus, it is possible to make an amplifier which will reproduce only the bass note of a sound. Naturally, this action must be avoided at all costs and transformers must be used in all amplifiers, which will as nearly as possible amplify all frequencies to the same extent. The one exception to this is the fact that some amplifiers are designed with a very definite cut-off or blocking effect which cuts out certain frequencies, usually the very low ones. In this manner, by causing the cut-off to take place at the highest frequency of the ground noise, it is possible to effect a recording and reproduction which is virtually free of objectionable ground noise.

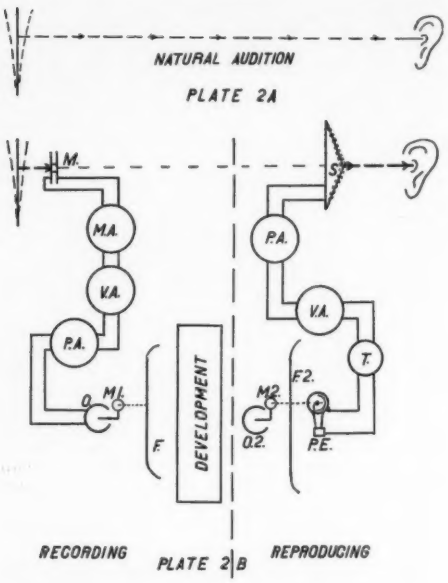
If the image of the illuminated slit is not sharply focused upon the film either in recording or in reproduction, it is evident that the spread of the image or the blurring effect due to the lack of focus will cause an overlap of frequencies which will slur them, if it does not entirely block them. This will cause a certain lisping indistinctness in speech which is commonly heard in theaters and which is most objectionable. Of course, development is quite important, as in the case of variable density recording it may absolutely alter the nature of the sound and in the case of variable area recording it can seriously affect amplitude. Finally, we have, of course, the very obvious possibilities of distortion which are due to improper amplifier design and low quality speakers. The recording and reproduction of sound is an operation that requires a certain delicacy of manipulation; but it is not one which is inherently difficult either in concept or in practice. The principal reason that we do not have available sound recording equipment for the amateur is the fact that the ordinary processes involved require apparatus which is so bulky and so costly that it would be impractical for the amateur to attempt its use. Of course, the amateur recording equipment will come; but when it does, it will be really portable, perhaps with the maximum weight of



A typical sound-track as recorded upon motion-picture film. The scale of enlargement may be seen from the perforations to be seen near one edge of the film. This illustration is, of course, only one edge of the film ribbon

FIGURE 4 HERBERT C. McKAY

XUM



Perception of sound illustrated by means of diagram

FIGURE 5 HERBERT C. McKAY

thirty-five or forty pounds. It will be inexpensive, which means it will cost somewhat less than one thousand dollars, and it will give results in every way comparable to those now heard in the motion-picture theater. It seems probable that the equipment will be for the disc record type of reproduction, although this is not necessarily true. In any event, the apparatus, which requires care and that of which a full understanding is necessary, is practically identical in the case of disc and film recording. For this reason, although recording equipment is not now available to the amateur, we will in a future article deal first with the equipment for the sound recording and second with the operative technique of this most fascinating branch of amateur motion-picture photography.

2A. Here we have the process of natural audition graphically shown. The vibrating object sends sound waves directly through the air to the ear where the waves cause the sensation of sound.

2B. The interruption of the natural sound wave path as encountered in sound-on-film recording and reproducing. The natural wave is interrupted at the microphone (M) and passed through the various stages until it is reproduced by the loud speaker (S) where it takes up its interrupted path to the ear. This illustrates the various changes through which the sound impulse passes.

1. Vibrating object. (Mechanical)
2. Microphone (M). (Mechanico-electrical)
3. Microphone amplifier (M.A.). (Electrical)
4. Voltage amplifier (V.A.). (Electrical)
5. Power amplifier (P.A.). (Electrical)
6. Oscillograph driving mirror (O). (Electro-mechanical)
7. Mirror for light reflection (M1.). (Optical)
8. Film receiving light impulse (F). (Physio-chemical)
9. Development of film. (Chemical)
10. Reproducing oscillograph (O.2.). (Electro-mechanical)
11. Mirror for reflection (M1.2.). (Physical)
12. Film, developed bearing light record (F.2.). (Optical)
13. Photo-electric cell (P.E.). (Electro-optical) Photo-Electric cell transformer (T). (Electrical)
15. Voltage amplifier (P.A.). (Electrical)
16. Power amplifier (P.A.). (Electrical)
17. Loud speaker (S). (Electro-mechanical)
18. The ear receiving the reproduced sound wave in air.

Two Hearts That Beat as One

"I AM a woman of few words", announced the haughty mistress to the new maid. "If I beckon with my finger, that means come."

"Suits me, mum", replied the girl. "I'm a woman of few words myself. If I shake me head, that means I ain't comin'." *Contact.*

ABOVE THE PACIFIC COAST
K. NAKAMURA
THIRD ROCHESTER INTERNATIONAL SALON